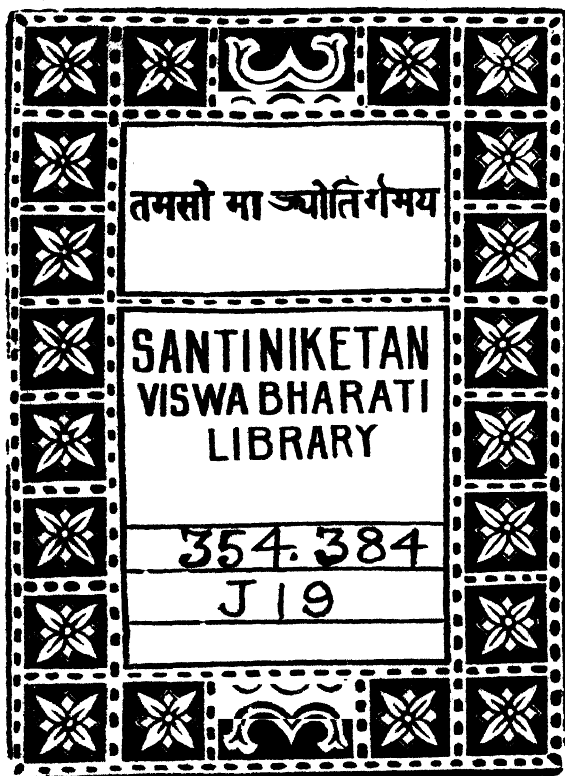


तमसो मा ज्योतिर्गमय
SANTINIKETAN
VISWA BHARATI
LIBRARY
354.384
J19

Industrial Problems
of
INDIA

Edited by

P. C. JAIN M.A., M.Sc. (Econ.), London

University of Allahabad

Revised and Enlarged Edition

KITABISTAN

ALLAHABAD

First Published in 1942
Revised Edition - 1944

PRINTED BY J. K. SHARMA AT THE ALLAHABAD LAW JOURNAL PRESS, ALLAHABAD, AND PUBLISHED BY KITABISTAN, ALLAHABAD

CONTENTS

CHAPTER I

INTRODUCTION

By Dr. Gyan Chand, M.A., Ph.D.

Professor of Economics, Patna University

The problem of industrialisation in India has again become a major issue under conditions created by the war. Demand for industrialisation has been a part of national demand ever since the first beginnings of the national movement in this country. We protested against being assigned the role of 'hewers of wood and drawers of water'—remaining only an agricultural country producing raw materials for the western nations. We wanted protection for our industries and felt very sore because in the interest of the British industries we were denied the right to shape our fiscal policy according to our needs. When after the last (1914-18) war, this right was partially conceded, we used it to develop our iron and steel, cotton, sugar, paper and cement industries. We chafed against the reservations of the policy of protection and wanted to go full speed ahead —to apply full-blooded protection and take our due place among the industrially advanced countries of the world. Remarkable results achieved by Russia through planning raised new hopes and the vogue which planning acquired everywhere strengthened our faith in planning as the sovereign remedy of our economic ills. The National Planning Committee was appointed by the Congress, its twenty-nine sub-committees produced their reports and the blue-prints of a national plan were pre-

pared. We knew that the plan could not be put into effect owing to political limitations of our position and yet we persisted because we hoped that we would win the necessary power through our own efforts and the march of world events.

The war has frustrated our national efforts and world factors have only thrown a lurid light on our industrial deficiencies instead of helping us to remove them. Now when the crisis is on us we want to make our own ships, locomotives, aeroplanes, and automobiles. But in spite of the little progress that has been made, we know that industrially we are extremely ill-equipped to meet the needs of the situation. With luck we may escape the horrors of war; but if we do not, outlook for our people is truly gloomy. There are other reasons why we are so ill prepared to defend ourselves, but among them our industrial backwardness is the most important. In four years of war a lot more could have been done than has been done; but it is, according to our old proverb, too late to start digging a well when fire is raging. Building up of modern industries requires time. Machinery, technical skill and organisation cannot be provided without forethought, preparations, and well-coordinated efforts. At present we cannot set up factories for making machinery. We have to import it and the countries, which could have supplied it to us, have their hands full. They have no surplus industrial capacity to meet our needs. The U. S. A. and Great Britain have to ward off the immediate dangers over-head. They are utilising and expanding their industries to feed their war machine. We, therefore, have to wait and look on, wait for the war to be over and hope that the better world, which, it is supposed is being fought for, will really emerge after it. Though the war, to use the phrase which our rulers and some politicians fancy, is at our door-steps, let us hope that it will not come within

our doors for we will fare very ill indeed if it does.

If we are fortunate enough to get through the war without the starkness of our industrial shortcomings being shown up even more clearly than it has been already, we will have to build up the industrial future of our country. Every thing will, of course, depend upon the alignment of forces after the war and the will of those who control them. It is impossible to predict how far the situation will be favourable for us even if progressive forces gain ascendancy after the war; and we all know or should know that even defeat of Hitler will in itself not ensure the ascendancy of progressive forces. The position is extremely obscure because it is full of many incalculable elements. But no war leaves the country as it found it, and it is absolutely certain that this war is going to change everything for better or for worse. Things may be worse after the war—even much worse; but it is also possible that they may be better—even very much better. We in India are living in an atmosphere of frustration in face of the greatest crisis that the world has known, but we cannot afford to let ourselves live in an atmosphere of mental frustration on that account. We have, as a matter of fact, to find compensation by being more fully awake to our vital needs and by devising ways and means of meeting them adequately; and this can only be done with the hope and faith that we have nothing to lose except our chains and a world, a saner and better world, to win for ourselves and for mankind.

Industrialisation has, therefore, to be conceived and carried out in terms of new and better India as a part of new and better world. This, however, raises the fundamental issue which Mahatma Gandhi has been placing before the country for the last two decades with great lucidity and force. The issue is that industrialisation is an evil thing in itself. It involves centralisation

of economic and social powers, it creates extreme inequality of income and wealth, it makes work mechanical and soulless, and it leads to displacement of men by machinery and, therefore, to unemployment of labour. These are the inherent defects of industrialisation and changes in social structure cannot remedy them. To him the essence of industrialisation is violence and exploitation and a non-violent social system based upon service and cooperation can be built up only through and on the foundation of handicrafts. That way a new culture can be created and developed—a culture based not on abundance of goods but on paucity of wants, a culture in which joys of spirit matter much more than goods of this world.

It is no answer to this argument to say that handicrafts cannot compete with mills: that the mill-made goods are economical and the cost of production of the handicrafts relatively high. This conception of costs according to the underlying assumption of this argument is wrong and is based on a false standard of values for industrialisation is extremely costly from the social standpoint. Besides leading to the growth of slums, sordid conditions of life and work, it necessitates the creation of a mechanism which sets up intolerable social stresses and strains and is liable to frequent breakdowns and violent disturbances. All that has to be reckoned as costs of factory production. They are not costs for the individual industrialists, but for society they are very heavy costs. In so far as the war is due to economic causes, its terrific cost in men and materials should also be debited to factory production. If industrialisation means struggle for markets and raw materials and, therefore, for political and economic domination its social costs in terms of insecurity due to it in peace and war and the crushing burden of modern armament and warfare are the price which has to be paid to secure the benefits

of modern civilisation through factory production. This form of production from this standpoint instead of being economical is prohibitively costly and it creates a parasitical culture which makes it inevitable that men should live on the labour of other men in an essentially servile state.

The argument cannot be dismissed by calling it a plea for a revival of the medieval economic system. It is a plea for a new set of values, for a new order based on vital needs of mankind. Economists cannot possibly deny the validity of the argument or regard it as irrelevant. Now that we are in the midst of a crisis which, has been created by conflict of values, value judgments have to be taken as pre-eminently relevant even from an economic standpoint; and these have to be given their due weight in the discussion of the need for and the utility of industrialisation. In India at present less than one per cent of our population is dependent upon power production. Industrialisation has hardly begun and, if there is no escape from the evils which Mahatma Gandhi attributes to it, it is worth while to cry halt to it, if possible, and to build our economic life and culture on the foundations of handicrafts.

The above point, however, is not decisive. There are two others which are also important and must be considered along with it. I have said that we should stop industrialisation if that is possible. But is it possible? India cannot stand alone. She is and must remain part of the world. We cannot isolate ourselves or shut out world factors. Industrialisation is at least partly responsible for the terrible destruction which is going on at present. It has made this possible by providing aeroplanes, bombs, tanks and other deadly instruments of war, and it is also its cause owing to its having made it impossible for any country to be self-sufficient. Distance has almost vanished and in peace and war every

country impinges upon other countries at thousand and one points. Whatever be the outcome of the war, it is not going to be national self-sufficiency. Only two alternatives are possible. Either a few nations will live on the rest or all nations will have to acquire the difficult art of living together. In neither case will India be able to choose her own course irrespective of what the people of other countries are doing and how they are living. If the process of bilateral battering now in operation goes on long enough, the countries like Germany and Great Britain will be devastated lands and it is possible that reconstruction of these and other countries may be preceded by a period of widespread chaos. But it is certain that the world will not relapse into a Dark Age in which science and arts will be altogether lost or preserved only in fragments in small isolated communities. Either on a totalitarian or on a cooperative basis economic recovery of the world will take place and industrialisation will be an integral part of it. If disorganisation goes far enough, the world may for a time have to fall back on handicrafts, but that will be merely an emergency measure, and permanent reconstruction will have to proceed on the widest possible use of power—production. Europe, America, and Japan will have to carry their own industrialisation much further. There can be no going back for them and countries like India and China will, either through choice or necessity, do likewise. If they are free to make their own future, they will realise their industrial possibilities themselves; and if they are not, their enormous resources will be developed by the dominant powers for their own needs and purposes. It may be worth while for us to revert to a handicraft culture, but we cannot build it if industrialisation is to be the basis of world economy as it is bound to be.

This leads us to the next point. If India and China

become free countries after the war, it will necessarily mean the passing away of territorial and economic Imperialisms. It will be the end of exploitation of the weak countries by strong nations and a truly cooperative world order will be inaugurated. Countries will have to live in peace and work together for the common good of all. This sounds utopian at present. It may be that it is. India may not be able to win her freedom, and if she does not, choice will not be hers and handicrafts culture will necessarily be ruled out. But if she is free and in a position to exercise choice, industrialisation will become an entirely different proposition. Industrialisation is merely power production. The conquest of power is, as H. G. Wells pointed out, abolition of toil. This is what it is in substance, but replacement of man by machine instead of being a boon appears to many a real curse. The late Mr. Mahadev Desai, after quoting figures showing how advance of mechanisation has led to reduction of human labour for production of goods states that more machines will merely hasten the doom of man (*Harijan* dated June 29, 1940). In one sense the point is so simple that it hardly needs any elucidation. Why should man's doom be hastened because he has to work less and less for producing what he needs? In 1914 motor making took 1197 hours and only 93 in 1934. In 1932 one worker made 453 bricks a day, by 1934 he could make 1500. At a cigarette factory of Ivry (France) which turns out 25,000 cigarettes a minute, 250 women were required in 1932 but not more than 2 in 1935. Mr. Desai has quoted these facts in support of his argument and many more facts of the same kind could easily be cited. Since the last war (1914-18) there has taken place a second industrial revolution which has led to very extensive use of automatic machinery and development of power resources; and the result has been a very remarkable reduction in human labour

required for production. From the social standpoint it is not in the interests of anyone that 250 persons should work where two are required or a motor car should be produced in 1197 hours while it can be made in 93. It is not in the interest of the community to create work by increasing the ineffectiveness of human labour. Reduction of work is reduction of toil and this is extremely desirable for society. Mr. Desai does not accept the validity of the well-known socialist argument that what is needed is not less industrialisation but a better distribution of wealth and leisure to save mankind from the evils which industrialisation is known to have produced. In his opinion parasitism is inherent in the ownership of large scale machinery; it is a system of living on the labour of others; it is at the root of violence and war. To make men work with less efficient tools of production is in itself no advantage. If what is produced satisfies a real need of the community, the less human labour it requires the better.

The point is fairly simple but it does not settle the issue. It is true that 'a system of production is for use and not for profit' and public ownership of the instrument of production need not necessarily lead to the evil consequences of industrialisation. Machines can and should be servants of man; and when work of muscles is done by machines, it releases human energy for work worthy of man—for work in the realm of mind and spirit, for creative work of the highest order. It does not lower human dignity but raises it to a much higher level. But there are two questions which are raised by 'a system of production for use' to which even the experience of Russia does not give satisfactory answers. A system introduced and maintained by ruthless exercise of force and violence tends to perpetuate itself, however beneficent its object may be. Its introduction, if it

causes a social upheaval, may be more than a transient phase in the history of a country, but even if that can be mastered by 'dictatorship', it is very unlikely that dictatorship will work for its own 'withering away'. Stalin's purges and mass executions may or may not have been justified, but when opposition to an individual becomes an act of high treason, a regime is established of which the sinister possibilities cannot be denied. Moreover, the dangers of economic and political despotism inherent in a system of centralised control of the entire system of production have to be admitted. It is bad enough to have to be subservient to an employer for one's living but subservience imposed by the state, which controls every avenue of employment, is infinitely worse. This omnipotence can be used not only for planned production but for suppression of every form of liberty and for bringing about an extreme regimentation of thought. In the opinion of Andre Gide and Max Eastman, erstwhile friends of the U. S. S. R., centralisation of economic power in Russia has actually led to these results. Without expressing any opinion on the consequences of centralisation of economic power in Russia, one can easily appreciate the latent danger in public ownership of the instruments of production. Large scale machinery has nothing parasitical about it. It is a very efficient tool of production. But if it is privately owned it leads to giant business, monopolistic competition, and instability due to conflicts within and between countries. On the other hand, if it is publicly owned, it creates a new Leviathan the might of which can be remorselessly abused.

It may be possible to eschew totalitarian methods in the establishment and working of a socialist system and have a democratic variety of it, i.e., a system which can be introduced and maintained without resort to force or undue reliance upon it. But recent experience does not

justify this expectation. The prospect of the introduction of even a mild variety of a semi-socialist regime has been enough to call forth a combination of reactionary forces in so many countries as to provide a volume of contemporary evidence in support of the Marxian class-war thesis. In Spain, Great Britain, France and the U. S. A.—not to say anything about Germany, Italy and Japan—fear of socialism has exercised such a malign influence on the conduct of public affairs and foreign policies of these countries as to justify scepticism of the possibility of a 'system of production for use' being introduced by persuasion and appeal to reason.

Dilemma of industrialisation is, therefore, real. But it has to be faced. There is no getting away from it. It creates unemployment; want and abundance exist side by side; there is trade cycle; economic and political frontiers do not coincide. But apart from the fact that the world as a whole has gone too far in the direction of industrialisation, it would be a great pity not to make the most of the enormous productive capacity which we now have at our disposal. For the first time in human history 'surplus' can be made available for all, 'surplus' which can bring culture within the reach of the masses. Relief from an unremitting struggle for existence is more than feasible but can be secured only if we solve the problem of productive organisation and if we can combine unity of social purpose (which is essential for socially beneficial use of our productive resources) with values which give meaning and dignity to life, i.e., if we can have social efficiency without social tyranny. Culture is impossible without 'surplus'. In the past, slaves and serfs and more recently wage-earners, peasants, and labourers have had to toil in order that a few lucky or gifted persons may have opportunity for cultivating graces of life and for expressing the deepest urges of man. Civilisation has until recently literally

flowered on the dung-hills of humanity. They have, therefore, drawn sap which was tainted at the source. That is no longer necessary now. In steam, electric, water and other forms of power we have now billions of slaves who can provide 'surplus' for all and these can and should be used without depriving the multitude of their right to economic security, minimum necessary for health, efficiency, culture and scope for self-expression. The dilemma of industrialisation is not due to power production. Machines have no will of their own. They are neither moral nor immoral. They are made by men and used by them. If they are used intelligently, they can make the future of mankind unlike anything that we have had and very much better. We can escape this dilemma in human relations by taming power and by making directors of industry public servants. The latter should owe their position to work and worth and not birth or wealth, and should know that their position is a public trust. They should retain their position only and as long as they are true to their trust.

The taming of power, therefore, is the crux of the whole problem. Industrialisation is inescapable, but whether it will be a curse or blessing will depend upon the ability of men to develop the right social purpose and carry it out by entrusting its execution to leaders who are conspicuous for their sense of public responsibility and their merit. This problem is not a problem of industrialisation only, and has not been created by it. Upon the solution of this problem hangs the future of mankind after the war and industrialisation has made it much more urgent than it would otherwise have been. This is the problem of India as it is of the rest of the world. It is also now realised that the Indian problem is as well a world problem; and if the Indian problem can be solved, the whole complexion of industrialisation

will be changed and India will have the power and, let us hope, also the will to deal with the real issues which it raises.

Economic and political issues are now so closely interwoven that it is almost impossible to say where economics ends and politics begins or vice versa. Industrialisation in India, it is clear, is both an economic and political issue. Development of industries is not only inhibited by our political limitations but we cannot view it in right perspective if political freedom remains for us merely a national aspiration. It is when India is actually free and takes her place as an equal member of the international community that we will realise fully industrialisation is much more than a question of Indian versus British enterprise. The dawn of Indian freedom has already quickened our social consciousness and has made us aware of the fact that 'swadeshi' in itself is not and cannot be enough. The 'swadeshi' movement was at its start a challenge and portent. It was an organised protest against a political wrong and an expression of incipient urge towards economic emancipation. But 'Buy Indian' is a limited objective and its realisation, apart from its inherent difficulties, will create more problems than it will solve. Economic structure of our country, even without larger measures of industrialisation, is extremely unsound and unstable. We are well aware of the fact that industrialisation that has already taken place has added to the precariousness of the economic situation, but what may be called purely Swadeshi mentality still persists. Replacement of foreign by Indian enterprise is an advantage, and if we make in India what we are now importing, it will mean economic progress. But the stage is long past for thinking only in these terms. Autarchy as national economic policy has had a great vogue but it is a part of the malaise which brought the world to its present pass. After

the war it will not be sufficient to secure enjoyment by all states of access on equal terms to trade and to raw materials of the world which are needed for their prosperity (vide point 4 of the Atlantic Charter of August 1941) but it will also be necessary to secure the 'fullest collaboration between all nations in the economic field with the object of securing for all improved labour standards, economic advancement and social security' (point 5). In these points is implicit much more than meets the eye and, though such statements are more a part of the game of manoeuvres and counter manoeuvres than a declaration of living faith, the points referred to above, if honestly and fully applied, foreshadow a basis of international economic life very different from anything we have known so far. The authors of this statement may have their mental reservations,[1] but the post-war situation will develop its own sanction and will give us the need for working out a truly co-operative international economic policy in the interest of all peoples. It will be a compelling necessity which Roosevelt or Churchill or their successors will have to reckon with. Collaboration referred to here has been an economic necessity for a long time. After the war it will become a political necessity for without it, it should prove impossible to build a real and stable peace and a permanent system of general security 'which will afford to all nations the means of dwelling in safety within their own boundaries and which will afford an assurance that all men in all lands may live out their lives in freedom from fear and want'.

We in India have to think out our problems, including the problem of industrialisation, in these terms.

[1] These lines were written before Mr. Churchill explained the implications of the Atlantic Charter for India and for other dependent countries—Editor's Note.

India is not yet free and the ruling classes in England do not realise that the battle of freedom cannot be won unless she becomes free. Freedom like peace, however, is indivisible and cannot be withheld from India in the post-war world; not for long. The end of war may not be the end of the period of sweat and tears for us. But India will be free and India's freedom should ultimately mean freedom from fear and want for her people. Our people are the most want-ridden and, therefore, fear-ridden people of the world. Industrialisation is needed not because we want merely to substitute home-made products for foreign imports, but primarily because we want to give our people relief from their soul-killing struggle for the barest subsistence. Yes, swadeshi is not enough. We have to make swadeshi an instrument of economic liberation of our people, of new hope and new life. We live in what a young poet, C. Day Lewis calls, 'poisoned intimacy' with fear. Political freedom will give us power to make our own future but for realistic and spiritual reasons we have to develop the will to quote from Lewis again, 'to cleanse the blood of life,' to purge ourselves of 'the guilt at the root,' the endemic guilt of chronic semi-starvation of our swarming multitudes.

Mahatma Gandhi's programme of the development of village industries would acquire a new meaning for us if industrialisation is to be taken not as an end in itself but as a means to larger life for our people. At present, as Dr. V. K. R. V. Rao has pointed out in his essay in this book, in India for one worker in large scale industries there are nearly five in the small and cottage industries. They are now being increasingly exposed to the competition of Indian large scale industries; and if industrialisation proceeds farther, they will find their lot grow worse. We have to think of them, we have to think of our increasing number of landless labourers, and we have to

think of the increasing enforced idleness of our agriculturists owing to the progressively diminishing size of their holdings. Industrialisation will hit them hard and absorb only a very small portion of this large and helpless section of our community. The ultimate place of cottage and small industries in our economic life is a matter for speculation. Industries which are auxiliary to large scale industries or are engaged in repair services will, of course, have to be retained. So will the industries which are producing art crafts and goods to order. The relative proportion of the workers in the last class will, as a matter of fact, increase if there is a wide diffusion of 'surplus', if a majority of people can afford to buy artistic goods and are cultured enough to value them. But apart from these industries we have to find means of employing men and women who at present are engaged in small industries or have no other means of making a living if industrialisation does not or cannot absorb them. We cannot leave them to their fate or trust natural selection to solve the problem. By improvement in technique, standardisation, and cooperative marketing we have to enable them to hold their own until economic reorganisation is complete and they can be provided with productive opportunities which give them an assurance of good wages, decent conditions of work, and economic security. Under the most favourable conditions this will take time; and if conditions are not favourable, it may take a long time before this transfer of human resources can take place. Enormous man power of India now very partially employed represents a loss of productive resources the value of which cannot be measured in terms of money for, more than the loss of productive power, it is the cause of low vitality of our people and the appalling loss of life in this country.

The most effective way of enabling our growing population to maintain itself until the necessary adjustment of our economic life can be carried out is to help them to produce for themselves as much as possible. If they produce for the market they have to face competition, develop a marketing organisation which they can neither provide nor run themselves, and have the necessary financial backing. These conditions are not easy to fulfil. They require initiative and enterprise of which the cottage workers themselves are not capable. This aspect of the matter has not received any attention even on the part of organisations like the All-India Spinners' Association and the Village Industries Association. As far as I know, these organisations are catering for the market and have not so far tried any experiment for enabling each village or rather a group of villages to be self-sufficient in respect of simple articles of everyday use. But this is a line of development which has to be tried. It will require cooperative unions, one for each group of eight or nine villages, which should produce commodities for the needs of their own members. They should produce not only their own cloth, but grow their own vegetables, produce their own oil, honey, milk, ordinary articles of furniture, matches, paper and a few other commodities. The details of an organisation for this purpose have to be thought and worked out, but it should have as its object the conversion of available labour power into goods which can and should be consumed within the small cooperative units. This organisation cannot be entirely self-contained, but it will have to be made as independent of money economy as possible. It will virtually be a system of labour exchanges and labour will be literally the source and measure of value of the goods produced.

The workers who will make, join, and use these cooperative units for supplementing their meagre re-

sources will be mostly part-time workers. They will use their spare time or rather the time which they cannot use otherwise for producing goods for their own use. But there will remain a large number of small-scale workers who will produce finished goods for the market. Experience has clearly shown that they are being sweated and exploited even more than the workers in the large-scale industries and what is worse, they cannot protect themselves. Their dependence upon the middlemen is inevitable under the existing conditions. The producer of Kashmiri shawls, Amritsar woollens, Ludhiana knitted wear, Aligarh locks, Murshidabad brass utensils, Benares saries, Bhagalpur silks are being badly underpaid and overworked and are without any security whatsoever. Village markets are very limited and products of local industries cannot be disposed of in these local markets. As the dependence and helplessness of these workers increases in direct proportion to the extent of market, it is vain to expect that small scale production itself would grant the workers any immunity from exploitation. If the existing small and village industries now producing for the market are to be maintained and more are to be created, the state has to take measures for their protection and development. These industries have to be protected and, if necessary, to be subsidised and their technical problems solved for them; their products have to be standardised and sold and, what is most important, the producers have to be given a square deal, in order that they may earn good wages and may not be overworked. In one word, the state has to do for all small scale and cottage workers what the All-India Spinners' Association is doing for the two lakhs of part-time spinners. The departments of industry in some provinces have attempted to do this on a small scale but this has to be done on a much larger scale and far more effectively.

Special measures for the protection and development of small and cottage industries are needed because they hold and will continue to hold for a fairly long time an important place in our economic life. But industrialisation has to be planned and proceeded with. There can be no question of our abandoning or suspending it. We cannot, as already stated, isolate ourselves from the world or economically become a hermit nation. Industrialisation must, however, be controlled in the interests of society and dislocation due to it must be reduced to the minimum. But one essential condition for the development of all industries in India, large or small, is the expansion of markets. As is well known in all industrial countries, goods can be produced, but they cannot be easily sold. Most of them have built their industries by finding markets in foreign and comparatively undeveloped countries; but owing to the entry of many rivals in the field and owing to an increasing industrialisation of the newer countries, which provided markets for the more advanced countries in the past, the struggle of markets has become acute and has created economic rivalries which are one of the most important causes of this and the last war. Now countries like Germany and Japan are trying to establish by force their own, to use the phrase which Japanese diplomacy has made familiar, sphere of prosperity, i.e., their own industrial preserves. If this attempt fails, and after its failure the foundations of a durable peace are to be laid, it will be essential to tap new markets which exist in all countries in the form of unsatisfied but real need of the people. There are practically no limits to the expansion of these markets and if the statesmen of the world have the wisdom and insight necessary for developing these markets and can put forth the necessary cooperative constructive effort for the purpose, the struggle for markets will not and need not continue. Thereby, the world can

become a sphere of common prosperity for all and the international economic relations be placed on a reciprocally advantageous basis.

But whether this happens or not, India has to find and develop markets within her own territories and these markets are capable of enormous expansion owing to the size of her population and its limitless unsatisfied needs. This is essential for the development of all industries, but particularly so for our large-scale industries. Most of the existing large scale industries, before the war started, reached the limit of the existing markets or were not far from it. The sugar industry had in less than a decade captured the entire home market and was suffering from overproduction. The cotton, matches, cement, paper, and even iron and steel industries were either near the saturation point or were soon expected to be. Absolutely speaking these industries are yet undeveloped, but our home market is the most important limiting factor in their development and without its expansion industrialisation in India cannot be carried much further and will not, even if it is socially controlled, contribute materially to the solution of our economic problem. India has to be her own sphere of prosperity and its possibilities must remain extremely limited unless she can bring about very great expansion of her own market. For this she has to increase, not what the economists call propensity to consume, but the ability of her people to do so, i.e., their purchasing power; and in India where a vast majority of people are and will remain agricultural, the general increase in the purchasing power of our people must necessarily mean an increase in the purchasing power of the agriculturist class.

This raises a host of issues relating to the whole economy of India which cannot be dealt with here, but

it is obvious to everyone who understands the essentials of the question that increasing the purchasing power of the agriculturist is a problem of the entire economic life and cannot be solved merely by currency and exchange manipulation, standardisation of agricultural commodities, distribution of better seeds, improvement of marketing facilities or measures of the same description. India's whole rural economy is insolvent, it involves toil which brings very poor return and the complicated systems of land revenue and land tenure and the increasing population render it well nigh impossible to place agriculture on a sound progressive and stable basis. If the expansion of markets is an essential condition of the progress of industrialisation in our country and cannot be brought about without expansion of the purchasing power of the agriculturists, our whole agrarian system must be recast to enable the country to industrialise itself. The stupendousness of the task is evident; but, unless it is accomplished, we will before long come to a dead end in industrialisation. Agriculture and industry in every country must act as counterparts, if integrity of economic life has to be preserved. In India agriculture has not only to provide raw materials for industry but it has also to provide the basis for industrial development by providing markets for industrial products; and that can only be done by the enrichment of the agriculturists. In other words, the standard of living of our rural population has to be raised primarily not only because this rise is essential for improvement of the health and vitality of our people but also because without it the market for industrial goods will be extremely limited in extent and, therefore, will seriously limit the growth of our industries.

If the above view is correct, we will have to undertake simultaneously the reorganisation and development

of agriculture and industry. This would necessitate application of science both to agricultural and industrial production, but even more than that it will necessitate change of economic relations. They have to be changed in the interest of social justice but much more in that of economic progress. Improvement of technique in agriculture and industry is important to accelerate the pace of progress but radical change in economic relations is much more so. India may have capital, be able to develop scientific research, and make available technical skill and expert knowledge for her economic development; even the provision of these conditions presupposes release of new productive forces and growth of wealth; but these conditions in themselves will only increase our sense of frustration if we cannot create a new framework of economic relations, i.e., get rid of inhibiting survivals of the past in our economic structure and change it to suit our vital needs of today.

This change will alter the whole background of our economic problems and also their order of importance. Our tariff problem, for example, which has exercised our minds so much will become a very different problem if the whole context of our economic life changes. The so-called policy of discriminating protection is, as Mr. B. P. Adarkar has called it, halting and incoherent. It has been conceived and executed more with a view to protect British interests than to reduce inevitable costs of protection. But if we reorganise our whole economic life, tariffs will lose their relative importance as an instrument of industrial development. Trade quotas, bilateral and multilateral agreements, and exchange control have already diminished the importance of tariffs as an instrument of economic policy. Where the state can and does control all key points of economic life, it becomes unnecessary to rely upon the policy of raising the prices of foreign imports—that is

what protection is in essence—for stimulating industrial development of the country. Artificial raising of prices for drawing investible funds into an industry is a very crude method of fostering industries. Its underlying assumption is that behind the tariff wall unregulated, competitive, laissez faire economy is to prevail. The industrialists in every protectionist country have been ardent advocates of high tariffs, i.e., of keeping out foreign imports in order to give them a chance to make high profits. But they have been equally ardent in their opposition to state intervention in industrial matters inside the country. The results have been the well-known evils of the inability of the 'infant' industries to grow up, political corruption, and cartellisation of industries. The industrialists want the state to protect them against foreign competition but they do not want the consumer, the worker, and the community to be protected against their economic aggressiveness. Tariff protection has, therefore, been a very mixed good and has created as many problems as it has solved. But for keeping out foreign imports it is not at all necessary to levy tariffs. If their continuance is against the interests of the country, they can be partially or completely prohibited. That is what has been done through quotas, exchange controls, and bilateral agreements in a number of countries. This is being done now for the efficient working of war economy in all the belligerent countries. All the complications of double, triple, or multiple decker tariff schedules, of assessment and valuation, and similar other perplexing difficulties are thereby easily avoided. Insertion of 'jokers' in schedules running into thousands of items becomes impossible, and the industries for which home markets have to be reserved can be created by 'direct' control of imports. Dumping and disturbances due to exchange depreciation and fluctuation of prices in the exporting countries are automatically ruled

out. The tariff question simply ceases to exist, and industries can be created not because they satisfy a 'triple' or any other formula but because the country needs them and has resource and determination to develop them. The industries established in this way cannot possibly claim any immunity from public control. Their costs, wages and organisation policies have necessarily to be submitted to public scrutiny and revision; they cannot be permitted to batten on the community and yet not owe any obligation to it.

Tariff protection is an incidence of competitive economy, a clumsy device for saving it from itself. Its contradictions have created stresses within every country and have placed intolerable strain on international relations. The policy has to be revised and revised not because free trade is a law of 'the natural system of economic liberty,' but because simple, direct, and far more effective methods of fostering the industrial development of the country can be or rather have already been devised. Same consideration applies to other problems. Currency, exchange, banking, labour welfare and other major problems of economic life will change their character and will call for different lines of approach and technique to meet the needs of the changed situation.

Owing to the limitations of space it is not possible to indicate the changes that will take place in the handling of these problems, but nevertheless it is necessary to say a few words about the problem of foreign capital which has such an important bearing on the problem of industrialisation. There is no way by which economic and political aspects of this problem can be separated. Foreign investments everywhere have had far-reaching political results both for the lending and borrowing countries: whether 'finance capital' is or is not the prime mover of economic imperialism economic domination of undeveloped countries has been achieved and

maintained through and for investment of capital funds. Foreign capital invested in India in the pre-war period has been estimated at £ 1,000 to £ 1,500 millions but, due to sterling repatriation and withdrawl of British capital, foreign capital which still remains invested in India is between £ 300 and £ 450 millions. It is true that we owe to it the development of our railways, tea, coffee, and rubber plantations, coal, mica, copper, jute and a number of other industries, but we also owe to it extreme centralisation of industrial power in India, the nature and extent of which are not as widely known as should be; the constitutional safeguards against, what is euphemistically called, discrimination is also due to this factor. India has her industrial oligarchy, and in spite of the entry of Tatas, Birlas, and more recently of Dalmia and Walchand into the field, they are mostly British. Andrew Yule, Bird, Shaw Wallace, Octavious Steel and a dozen other foreign companies dominate the industrial economy of India and control finance, jute, cotton, coal, tea, transport, electricity, engineering and many other enterprises. The Indian concerns like Tatas have also acquired powerful position, but they are far behind their British rivals, and the Indian industries and industrialists are being increasingly used by these foreign interests in order to present a facade against swadeshism. These industries are coming to working agreements with the British firms according to which they get some of their pickings, and the Indian industrialists are being given directorial positions to forestall the criticism and possible action on the score of these enterprises being entirely foreign. The economic strategy is clever. By it a firm like Associated Cement Company, in spite of its effective control by Killick Nixon and Company, becomes an Indian enterprise and puts forward its claim as such. But in all such cases the basic facts remain unchanged. Control and manage-

ment remain in British hands and the apparent change does not impair the paramountcy of British interests.

Erection of the tariff wall has only worsened the position and Wimco, the Swedish combine which controls nearly two-thirds of the production of matches in India, Lever Brothers, Imperial Chemical and other 'India Limited' concerns are now entrenched behind the tariff wall and have increased the profits and power of foreign enterprise in India. As under the new or defunct constitution we cannot assist Indian firms without extending the same assistance to all British controlled firms, the consumer and tax payer in India have to carry fresh burdens for the benefit of these enterprises. Trustification of the industrial economy of India, limited as it is, is all but completed; a few score families have all the key positions and power in their hands, and this trustification is pre-eminently an achievement of British enterprise. It means economic bondage for the country and creates formidable obstacles in the way of India's freedom.

Our attitude towards foreign capital after the war should, however, depend upon India's political position. If India is free, India will have the power to regulate foreign investments and determine the terms on which they will be permitted. Everything is to be gained by India having surplus resources of other countries for her economic development. Her own capital resources can be further mobilised and increased, but taking into account the extent and urgency of our capital requirements, Indian resources will need to be supplemented by foreign borrowing. After the war international investments will have to be subjected to international control if we are to see an end of the era of political loans, international financial pools and the virtual control by high finance of foreign policies of the various states. The state in future, even in countries with

investible surplus, will have to control the investment of its citizens and financial institutions in foreign countries ; and the control will have to be coordinated by an international authority. If this happens, the problem of controlling foreign capital in India will become comparatively simple. The foreign firms already operating in India will also have to be dealt with. Expropriation would, of course, be out of the question if political relations of India can be readjusted and placed on a satisfactory basis by the conference method; but under the most favourable conditions, public control of important industrial concerns will be necessary and will have to be made more complete in the case of the concerns which at present are occupying a dominant position in our industrial economy.

The problem of foreign capital, like other major problems, will, therefore, assume a different aspect under the changed conditions. We have, as stated before, to look ahead and think out in terms of a better and brighter future of our country. The course and outcome of the war cannot be predicted. It may be that India and the world have to pass through 'a long and dark tunnel' not only during but also after the war, and it may be that India will have to remain longer in the tunnel and find it darker than most other countries ; but at the end, for India also there is light. The assumptions on which the above argument has been based, may not hold good for a long time. But the case for industrialisation has to rest on these assumptions. Under the existing conditions it is true that industrialisation is no solution of our economic problem and its further development cannot but be severely repressed by the basic facts of our economic and political life. If the conditions do not change for the better, or they get worse, we will have to make the best of a bad job. For that no thinking is necessary. We will have to fit

our actions to the facts as we find them and they cannot be visualised in advance. But industrialisation is a world problem and cannot be solved unless economic life of the world is reorganised on a rational, cooperative, and stable basis. The problem of industrialisation in India is a part of the world problem and world wide reconstruction would also involve reconstruction of Indian economic life on a cooperative basis. We have to think on these lines, otherwise we will find that we are dealing with the issues of the past and not the task of the future.

In the collection of essays in this book, which is now going into a revised and enlarged second edition, a number of economists, have treated the problem of industrialisation from different points of view. It is hoped that readers will be helped to gain an insight into an understanding of the complexity and manysidedness of the problem through reading these essays. Each writer has brought to bear his special study and point of view on the aspect dealt with by him. But through them all runs a unity of purpose derived from the view that industrially India must rise to the full height of her possibilities to bring happiness, prosperity, and higher standard of life to her entire population. This view is derived from faith in India and her future.

CHAPTER II

PHILOSOPHY OF INDUSTRIALIZATION

By J. K. MEHTA, M.A.
University of Allahabad

There has been much controversy in recent years about the industrial future of our country. One point of view favours the maintenance of agricultural predominance in our economic system, the other wants a rapid industrialization. Two considerations justify a detailed enquiry into this question. In the first place, even if we are satisfied that industrialization is the goal towards which our efforts should in future be directed, we have at least to satisfy an important section of the public whose extreme conservatism coupled with the belief in the superiority of Indian soil and climate for the production of agricultural commodities has made it feel strongly that crop growing must for ever remain the principal occupation of the people of this country. In the second place, a definite answer is necessary in our own interest. For, it is obvious, that it is not possible for us to pursue an industrial policy on sound lines unless we are clear as to why and for what purpose we really want to industrialize India.

Every country has certain advantages over others. These may be natural, such as are to be found in the quality of the soil, the climate and the geological structure of the land, or they may be traditional and cultural. It is but natural, therefore, for a country to develop along the lines indicated by such advantages. Thus

India has always been an important agricultural country, producing a large variety of food stuffs and other raw materials for industrial uses. The fertility of her soil, the variety of climates, and the inherited skill of her farmers all combined to make her a first rate agricultural country.

It is not necessary, however, that a country that has special advantages in agriculture should be totally unfit for manufacturing industries. Manufacture is not the monopoly of any one nation. Our country, for instance, has made remarkable progress in this direction also. Her raw materials were worked up into finished products and consumed within the country; and such of her products as were sent abroad had become the envy of foreign producers. Evidence to this fact is found in the various publications that deal with the economic conditions of India in earlier times. The Report of the Industrial Commission is a document that contains sufficient material to prove the industrial supremacy of India in the days gone by. Professor Weber says that the "skill of Indians in the production of delicate woven fabrics, in the mixing of colours, the working of metals and precious stones and in all manner of technical arts has from very early times enjoyed a world wide celebrity."

It was only after the Industrial Revolution in the west that India began to lose her position and the "erroneous idea that tropical countries with their naturally fertile lands and trying climate were suited to the production of raw materials rather than to manufactures" began to spread.

India, therefore, possessed at least in those earlier days all that was necessary for a healthy development along industrial lines. Nor is there any reason why what was possible once should become impossible now. Provided the factors of production are sufficiently mobile

or labour can be trained and materials and capital imported, a country can develop almost any industry within certain limits. Thus, some of the western countries that did not produce their own raw materials were able to establish flourishing industries by taking advantage of the means of transportation that brought to them all the necessary materials from abroad.

Given favourable conditions there is no reason why India should not once more be able to take her place along with the other industrial countries of the world.

But what is the special advantage in becoming an industrial country? A purely agricultural country would have no serious disadvantages were manufactured articles always obtainable by exchange. For, a major part of our welfare consists in having and consuming all the desirable things that we want, no matter whether such things are produced at home or imported from abroad. But this is true of peace times only: in times of war, as we shall see later, it is not possible to depend always on foreign nations for the supply of important or indispensable things. We may possibly do away with luxuries in times of war but we cannot do away with the prime necessaries such as food, clothing and shelter and the materials and equipment needed for the prosecution of a war.

But even in peace times it is not very desirable for a country to specialize merely in the production of agricultural commodities. In the first place, a more balanced economy, providing a larger variety of occupation, is to be preferred to an unbalanced one, so that there may be ample scope for the labour and capital of the country to shift from one occupation and trade to another according to need. It is a wise policy not to put all the eggs in the same basket. In the second place, it has to be noted that the demand for agricultural products is, in general, less elastic than the demand for

manufactured articles. When a country produces and is, therefore, able to offer only those articles the demand for which is not so elastic it is at a disadvantage in bargaining with another country the production of which is not confined to commodities of such inelastic demand. If we want, for some reason or another, a larger quantity of cloth from a foreigner, we shall have to offer a very much larger quantity of wheat to induce him to accept the bargain. For, his want for an extra quantity of wheat is not so strong as our want for an extra quantity of cloth. The terms of trade are, therefore, most likely to be unfavourable to an agricultural country. We do not mean to say, of course, that a purely manufacturing country has no corresponding disadvantages in bargaining with an agricultural country, but with that we are not here concerned.

Besides these risks and dangers of a purely agricultural economy there are certain positive advantages to be secured by a happy blending of manufacturing industry with agriculture. In the first place, manufacturing industries which necessitate the use and repair of machines exercise a healthy educative influence on the people. They contribute to a fuller development of a man's personality not only by providing opportunities for the exercise of intellectual qualities, but also by creating in him a greater sense of responsibility towards his work. In the second place, the development of industries helps the agriculture of the country in several ways, in the long run, by reducing the pressure of labour on land and by increasing the purchasing power of the population. Thus, there would be a greater demand for agricultural products, higher prices, more profits and a smaller number of men to share this bigger profit.

All that has been said in favour of a more balanced economy—a happy blending of agriculture and manufacture—points ultimately to an increase of wealth

and welfare in the country. Wages will rise with a greater demand for labour of all descriptions. Profits will increase and rents will rise in urban areas. Production will, on the whole, become less risky as manufacturing industries will not need to depend so much on an undependable climate, and unemployment both seasonal and non-seasonal, will decrease. Famines will become less intense in their severity and less frequent in their occurrence. And there will be a perceptible decrease in the unemployment among the educated classes as an increasing demand for their services will be created by the development of industries. Lastly, it may be noted that with the increase of wealth in the country, the revenue of the State will also increase. Not only will the old taxes yield more revenue but it will become possible or less burdensome to levy additional taxes. All this will mean an acceleration of the speed with which social and economic reforms can be introduced in a country.

When these advantages of industrialization are remembered together with those special advantages which accrue in times of war, it becomes quite obvious that self-sufficiency, to the extent to which a wise policy of industrialization will permit, is desirable and perhaps no price may be considered too high for it. It would not, however, be necessary to pay a very high price in the case of most of the industries. A judiciously devised system of protection can develop industries for the growth of which this country may at present appear to provide no facilities. But the question of protection need not be taken up here as it has been fully discussed in a subsequent chapter.

If then industrialization is possible for any and every country what is it that has prevented its rapid growth in the case of our country? Why is it that not only did the industries that already existed not develop further

but they actually began to decline and in course of time disappeared altogether from the economic field.

Let us take up the causes of the decline of our industries first. There are four factors that contributed to this fall. In the first place, some of the industries lost the patronage of the Indian courts and the noble families whose number and position naturally began to decline with the political supremacy of the foreign nation in India. In the second place, the demand for the products of the Indian industries went down with those changes in the tastes and ideals of the people which the impact of western civilization made inevitable. It is always the ways and ideals of the ruling nation that become the model for others to copy. Thus, as the tastes and fashions began gradually to change, the demand for the products of our industries found itself yielding place to the demand for the foreign manufactures. In the third place, we have to note the effect of the import of cheap machine-made goods into India. The industrial revolution that took its birth in England gave to her and other western countries a lead in the manufacture of commodities from the adverse influence of which India could never completely free herself. The cheap foreign goods invaded and captured our local markets driving away from them the more expensive, though in some cases the more artistic and durable, products of Indian manufacture.

These three causes, however, cannot explain the complete ruin of our industries, though they might account for the initial setback. Why could not our industrialists or artisans change over from the manufacture of old fashioned articles of a particular set of designs to that of up-to-date articles with new and attractive designs? Again, was it impossible for them to adopt mechanized system of production in the manner in which it was adopted by the other countries of the

world? It is obvious, therefore, that for the real cause of causes of the decline of our industries we have to look elsewhere.

The real cause, it is alleged, is to be found in the policy of the East India Company which was directed against the trade and industry of India. Everything possible was done by it to prevent the Indian goods from selling in the English markets to the detriment of the home producers. The imports of certain articles were actually prohibited while those of others were drastically cut down by the imposition of heavy import duties. These measures had the desired effect of killing those industries which depended on the demand of the foreign markets, so that in the words of Mr. Digby they (these measures) were withdrawn only after the export trade in manufactured articles had temporarily or permanently been destroyed. In this connection it is of interest to note that the imports of Indian dyed calicoes were prohibited in England between the years 1700-1824, while certain other imports such as those of raw and manufactured cotton and wool and muslins of white calicoes were made to pay heavy duties ranging from 30 to 80 per cent.

These indirect ways of discouraging Indian industries, we are told, were supplemented by other measures of a more direct nature. Thus, as Mr. R. C. Datta says, "In their letter to Bengal dated 17th March, 1769 the Company desired that the manufacture of raw silk should be encouraged in Bengal and that the manufacture of silk fabrics should be discouraged. They also recommended that the silk-winders should be forced to work in the Company's factories and prohibited from working in their own homes."

However, it may be noted, it is seldom necessary to take recourse to such measures of a direct nature. For, the weapon of import duties is sufficiently effective and

can, in most cases, be relied upon to kill or disable the industries against which it is employed. It is only when it is open to the other countries to retaliate with similar measures that the import duties fail to achieve their object. But India's dependency on a foreign power denied to her this right of self-defence.

The conditions have, however, slightly changed since the time of the East India Company and during the last fifteen years in particular the government of India has helped a number of Indian industries by the levy of import duties on foreign imports. The Cotton, Iron and Steel and Sugar industries are three conspicuous examples of protected industries.

For rapid industrialization in modern times we need a simultaneous adoption of a number of measures. In the first place, the foreign imports of competing commodities should be restricted temporarily. This is done, under normal circumstances, most easily by the levy of import duties that raise the home prices of foreign goods. In the second place, everything possible has to be done within the country to encourage the growth of the industries. Thus, for instance, all hindrances, natural or artificial, to the movement of labour, materials and finished goods should be removed and all necessary steps to create confidence in the minds of the capitalists should be undertaken. These will ensure an adequate supply of funds for the finance of industries and an elastic supply of men and material for the work of production. To facilitate the movement of finished products a suitable railway rates policy is essential. This is meant to ensure reasonably low prices of goods in distant places within the country. In the third place, some direct encouragement can be given by the government to certain industries through the purchase of their products. This measure has essentially the same effect as the import duties. In recent times the

provincial and central governments have, to a certain extent patronized some of the industries in this manner.

Lastly, some direct assistance can be given to industries to enable them to improve their technique of production. Researches with a view to the improvement of processes of production, to ensure better quality of work or lower cost of manufacture should be encouraged. Either the government should own and maintain certain research departments for the benefit of industrialists or they should subsidize and help in other ways the research laboratories and experimental workshops maintained by the industrialists. Even this is done today on a small scale, but the efforts of the government in this direction are confined almost wholly to the improvement of agriculture.

Cases are conceivable, however, in which industrial development may proceed very slowly in spite of all that the government can possibly do. If, for example, there is a serious shortage of labour, capital or enterprise, it would be difficult for the government successfully to promote industrial development in the country. But such difficulties are more imaginary than real. At any rate, it is possible to overcome them in course of time. We know that many countries had to import labourers from abroad when they were faced with the scarcity of skilled workers. Ceylon and Burma are examples near at hand. Again, a new country has almost invariably to depend on foreign capital for the exploitation of her resources. For, our modern methods of productions are so capitalistic that it is almost impossible for an undeveloped country to take up the stupendous work of industrialization unaided by other countries. A new country has always to pawn her future for a successful development. Then, there is the enterprise. Production which is by nature risky has become still more so today on account of various factors. We need risk-

takers to invest their own capital or that of others entrusted to their charge in projects that may or may not succeed.

But none of these difficulties is insuperable. Labour can either be imported or trained at home, capital, thanks to the institution of credit, is mobile enough to move from one corner of the world to another with considerable ease; and enterprise which is never absolutely wanting thrives so well on the success of a business that its scarcity can never become a serious menace to the industrial development of a country.

A country like India, at any rate, need not apprehend any serious difficulties in regard to the supply of these factors of production. For, its labour power is almost inexhaustible. In quantity it compares favourably with almost every other country of the world, while in quality we know that our people are not inherently stupid. Under proper guidance and suitable conditions of work they often work with amazing skill and vigour. Nor is capital scarce in the real sense of the word. There are many sources of capital which if properly tapped would provide sufficient finance for a good industrial beginning. Capital, moreover, is productive of more capital. With the progress of industries the funds from which capital comes will naturally grow. The proverbial shyness of capital in India is in fact the result of overcautiousness of capital. It is not so shy as it is timid. Under more encouraging circumstances capital is bound to come out of its hiding places. Even if a genuine shortage of capital is experienced in the beginning there is no reason why industrial development should stop when foreign capital markets can be relied upon for funds.

We need not discuss at length the question of labour and capital from a more technical point of view as these questions are adequately dealt with in the chapters

that follow.

Industrial development of a country does not necessarily imply the growth of monstrous factories. There is always sufficient scope in a progressive country for many moderate sized factories. It is not necessary, therefore, that all our productive plants should be of the largest possible size. It is, however, natural that a large proportion of our industries shall be organised on a basis wider than what is appropriate to the so-called cottage industries. The reason for this will be explained later.

Let us first consider whether the existence and maintenance of cottage industries is compatible with our notion of industrial development of India. As a matter of fact, there is no economist who believes that cottage industries have absolutely no future. There may in certain cases be abundant opportunities for the development of industries on a small scale. In India, or in any country whose economy is largely agricultural such opportunities are not at all scarce.

The advantage in small scale cottage industries is often due to the fact that it involves hardly any expenditure on labour and very little expenditure on land or buildings. An agriculturist has a certain period of enforced idleness. He may not be as idle a person as some people make him out to be; but he certainly finds himself without sufficient work in off seasons. It is in such times that he can utilise his and his family's labour in producing things in his own house, with or without simple machines. The saving in the cost of labour thus effected may not, and often is not, sufficient to enable him to sell his products at prices at which factory products are sold in the towns. But there are a few other advantages which a cottage industry may in certain cases be able to secure. In the first place, as already noted, the agriculturist has seldom to pay extra rent for producing these articles. In the second place, he is

often able to get raw materials in his own village or from one nearby. He thus saves the cost of transportation which a factory located in the town has to incur in getting his supply of raw materials. Lastly, the agriculturist can easily dispose of the output of his industry in his village or in neighbouring villages.

For these reasons it sometimes becomes possible for small scale industries to exist side by side with large-scale industries. But the field for cottage industries is limited and is bound to get still further limited with the progress of industrialisation. For, on the one hand, agricultural population will decrease and on the other, the efficiency of industries will increase as industrial development proceeds. It is, therefore, the large scale industry at which we should aim and towards the successful development of which all our efforts should be directed.

To secure best results each industry and firm must have what is called the optimum size, that is, it should neither be too small nor too big. A very large size is as wasteful as a very small size. The size appropriate to a firm has to be determined by a careful consideration of many factors. A size that is too big for a firm producing one commodity may be too small for another producing a different commodity. And such differences in the optimum size may also be due to other causes. The modern tendency is for the optimum size to increase and there are two factors that have exercised powerful influence in this direction. The first is the growing use of machines. Technically we express it by saying that the system of production is becoming more and more capitalistic. The more capital we invest in production, in the shape of machines, plants, etc., the more necessary it becomes to turn out a large output. The heavy supplementary costs or the overhead charges must be spread over a

large output. The second factor is the widening of markets. A producer is not content with manufacturing goods; he has to sell them also. Very often it so happens that a factory is able to produce a larger quantity than it finds possible to sell. In such a case the factory has to work under its optimum capacity. In other words, its effective optimum size is kept below what it could be. As new markets come within the reach of such factories, it becomes possible for them to increase their output. The improvement in the means of transportation has brought far off markets within the reach of many firms and has enabled them to increase their optimum size. In India today many of our cotton and jute mills as also our iron and steel industries are organized on a large scale. As we learn to make more and more use of the improved technical processes the size of our firm shall increase.

By all this, however, we do not mean to say that the process of industrialization is a simple and easy one. It is not possible to turn India into a full fledged industrial country overnight. Difficulties have to be faced and a suitable price paid for the ultimate benefits of an industrial economy. The period of transition is always a trying period. Old paths have to be abandoned and new paths have to be cut. The whole national economy has to undergo a change—a change the reactions to which will be neither mild nor pleasant. The consumers will perhaps have to make the greatest sacrifices. Protective duties will raise the prices of goods which will fall only gradually as the home production increases or the protection is withdrawn by stages. The agriculturist too shall have to suffer during the process of adjustment. There will be a scarcity of labour which, however desirable it may be from the point of view of the labourers themselves, will increase the cost of production of the agriculturists. There will also be a slight shrinkage of demand for the products of land. For, during the

period of transition there will be on the whole a decreased production of manufactured goods and, therefore, a smaller demand for raw materials. In the course of time, however, the gap created by the fall of imports will be more than filled by increased home production, so that the demand for the produce of land will look up again.

For a rapid change from the present state of affairs we shall need the co-operation of various agencies. As has been indicated in the foregoing pages the transport companies shall have to adopt a policy in respect of freight charges that may harmonize with the general policy of industrial development. Some sacrifice on the part of the railways would, therefore, be called for.

The monetary policy of a country has profound influences on the entire economic life of the people. Money is the medium through which all exchanges are made, so that the more scarce this medium the more difficult it is for the goods to sell or exchange hands. We need an amount of money that may satisfy and adequately satisfy the genuine needs of trade, commerce and industry. For this purpose an elastic supply of money is most desirable. At any rate, money should be available to businessmen and industrialists easily and quickly. A low rate of interest (though not unduly low) is an essential condition for the success of growing industries. Industrial banks would be a great help to new industries. It would be their function to provide companies with the necessary amount of capital for the establishment of industries. These and other measures will become necessary and it is on the proper co-operation of the various agencies mentioned here that the success or failure of the scheme will ultimately depend.

Let us now pass on to the consideration of a few other aspects of industrialization. In the foregoing discussion of this question we have confined our atten-

tion more or less exclusively to the purely economic issues. Let us take up now what is apparently a non-economic consideration. Of course, we have to remember that there is nothing in this world that has no economic significance either immediate or remote. But there are certain facts which are primarily non-economic and only secondarily economic, and it is one of such facts that I wish to take up now.

The prestige of a country or a nation is something that is highly psychological. It is impossible to measure it in terms of concrete things. It is not simply wealth or economic condition that counts here, though, of course, they both contribute towards the status of the country. Dress, for example, which is no index of civilization has still come to be associated with the prestige or respectability of a nation. The existence of manufacturing industries in a country exercises a similar influence on the minds of foreigners. Agricultural economy is a mark of backwardness. By industrializing herself, therefore, a country begins to command the respect of other countries. The opinion of others is as valuable an asset for a country as it is for an individual. It gives to one a sense of self-respect which does so much to develop the full personality of a man. The same is true of a country. The independence and security of a nation's existence depends greatly on pride and patriotism which foster on its reputation and prestige. If India has to secure for herself this advantage, if she has to overcome her sense of inferiority it is essential for her to adopt ways and means to make herself appear more respectable to others. Industrialization, we admit, is not the only thing necessary for this purpose; but with other things we are not here concerned.

The other fact which I wish to take up refers to the question of armaments. For self-defence, if not for attack, we need armaments. A country has to live in peace

but it has to be prepared for all emergencies. We have to utilise our resources for the needs of peace time but a certain proportion of them have unfortunately to be kept constantly engaged in the service of preparations for war. Expenditure on armaments from the widest or world point of view has caused the greatest waste that is going on in the modern world. A proper utilization of the resources that are thus wastefully employed would do so much to relieve the world of misery and pain. But, however wasteful such expenditure may be from this point of view, it is obvious that from the point of view of each individual country it is as economical and desirable as any other expenditure. So long as danger of attack continues to threaten the peace and independence of a country it cannot afford to neglect this otherwise unproductive service of national defence. Apart from providing employment to so many people in the forces and in the factories that produce war materials, this heavy expenditure secures no positive benefits for the people, but it guarantees peace and security which are not only necessary for the proper functioning of other national services but are desirable for their own sake.

Industrial development thus finds an additional justification in the needs of armaments.

We have now come to the end of this chapter. We have seen how some countries have special advantages in the production of certain commodities and others in the production of other commodities. We have also seen how it is always possible and desirable for a country to have a balanced economy with her resources properly developed and wisely utilized in the production of both agricultural and manufactured commodities. We have enumerated and explained the various peace-time and war-time advantages of industrialization and have attempted to investigate the causes of the decline of Indian

industries in the past and their slow growth in the present. We have indicated the lines on which we should proceed and in this connection have pointed out the various agencies whose goodwill and co-operation would be needed. We may, therefore, conclude by observing that industrialization which is always desirable is particularly necessary these days; that it will increase the wealth and welfare of the people by bringing about a more balanced economy in which all the resources are adequately utilized, and by guaranteeing them a greater degree of security of existence.

CHAPTER III

MINERAL AND POWER RESOURCES

By DR. V. S. DUBEY, M.SC., PH.D. (LONDON), D.I.C.

Honorary Professor of Economic Geology, Benares Hindu University

After agricultural products, the mineral products hold the next place of importance. The growth of civilization is so much connected with the minerals that the different ages have been given the names of the metals then in use. Our mechanical civilization is wholly dependent upon the use of minerals. The minerals can be classified in three groups :—

1. Non-Metallic Minerals,
2. Metallic Minerals,
3. Fuels.

1. *Non-Metallic Minerals*

The most common examples of the non-metallic minerals are common salt, limestone, glass-making materials and refractories while some examples of the metallic minerals are the ores of iron, and copper. The most important fuels are coal and petroleum.

Common salt is the most important non-metallic mineral. Besides being used in food it is used in some of the most important chemical industries such as the manufacture of washing soda, caustic soda, and other compounds of chlorine. The main supply of salt in India comes from Khewra in the Salt Range where

high quality salt is available. The production here amounts to 1·5 lakh tons annually. The next important sources of salt in India are the Sambhar Lake and other lakes in Rajputana which produce 2·5 lakh tons annually. Salt is also produced in Bombay and Madras Presidencies by solar evaporation of water. Other sodium salts found in India are natural sodium carbonate (Trona) in Sind up to the extent of 3 thousand tons, natural sodium sulphate in vast amounts in Jodhpore State and sodium borate (borax) in Tibet. Besides these, India imports a lot of salt from Europe and Aden. But as yet salt has not found much use in Indian industry because the industries of soda-ash and caustic soda are still in their infancy. A start, however, has been made recently. In 1938 a company was registered in the Punjab for making soda-ash from salt deposits by the Solvay ammonia process. Early in 1939 a big factory was revived in Kathiawar at Dhrandhra to manufacture soda-ash and caustic soda from salt and lime, both of which raw materials are available near the site of the factory. Tatas have recently started a big chemical concern near port Okha in Kathiawar to manufacture soda-ash and caustic soda. In India we at present use about 20 lakh tons of salt every year, out of which about 5 lakh tons have to be imported. With the development of our industries the demand of salt is likely to increase, and we can also increase our supply of salt by solar evaporation of water.

The next important non-metallic mineral is limestone. It is used for making lime and cement, soda-ash, caustic soda and it is used by the sugar industry, iron and steel industry and for several other purposes. Total production of lime stone in India is not less than 5 million tons in a year. It is found in different parts of India, such as the Salt Range in Punjab, Himalayan areas in the U. P., Vindyal in C. P. and

C. I., Bihar and Madras Presidencies. In Kathiawar it is found near salt production centre where Tatas have established soda-ash industry. It is also largely used as building stone and as ornamental stone in the form of marble. India produces limestones of every kind ranging from very pure to ordinary purity. We can substantially increase our supply of limestone without much increase in its price.

The refractories, among others, are fire-clay, sillimanite, magnesite. Fire-clay, the most important refractory material is found mostly in the coal-mining areas, where it is converted chiefly into fire-bricks. Magnesite occurs in Salem district in Madras, but most of the Indian output of magnesite, so also of sillimanite, is exported.

India produces roughly 2 lakh cwts. of mica every year, but most of it is exported to Europe and America where it is utilized for electrical industries. The chief sources of mica production in India are the districts of Hazaribagh and Gaya in Bihar, Nellore district in Madras, and several States in Rajputana. With the available supply of mica, the abundant production of shellac, and the vast market, it should not be difficult to set up a micanite industry here.

Clays form another important class of minerals. China clay which occurs in plenty in India, is used in ceramic industry and also as a filler. It is also used for sizing paper and cloth. The deposits of pure china clay are only few, and they occur in Bihar. New deposits have now been discovered in Travancore. The total amount of china clay produced in India amounts to about 17,000 tons and a large amount is imported from abroad. The imports of goods made from china clay amount to about Rs. 60,00,000. If vigorous efforts are made it is quite possible to produce most of these goods in our own country.

The other non-metallic minerals, such as pure white sand, soda-ash and limestone, are used in the glass industry. Pure white sand occurs at many places in India, but at present it is mostly produced near Allahabad from where about 900 wagons are supplied every year. This white sand is obtained by crushing the white Vindyan sandstone. There are deposits of white sandstone at many other places also. Limestone and salt, as we have already seen, are also available in plenty and from these can be manufactured the third constituent of glass, soda-ash. We produce in India glass goods worth about Rs. 1·5 crores and about 1.25 crores worth of goods are imported from foreign countries. With our supply of raw materials India can very well supply all her needs of glassware.

Among the other non-metallic minerals found in our country are asbestos, barytes, beryl, gypsum, ilmenite, mineral paint materials, monozite, phosphate, sulpher and zircon. Asbestos is found in India in large amounts, the average annual production being 100 tons. This is used for making ropes, board, and cloth and for several other uses. It is used in several industries for which Indian asbestos, though of inferior quality, is quite suitable. Good quality asbestos is found in India. Recently it has been found that asbestos is of good use for manufacturing asbestos sheets for roofing purposes. At present India has no asbestos industry worth the name and in spite of its large production there is no asbestos spinning and weaving industry with the result that during the war time there is a great dearth of asbestos cloth required for war industries. And all of it has to be imported from abroad. The mineral barytes occurs in India in large amounts, chief deposits being in Madras Presidency, Central Indian States and Bihar. It is mostly used in the manufacture, of points and for the manufacture of barium salts. The

industry is not well developed but it has got a great scope.

The production of barytes amounts to about 16,000 tons, and the average price is about Rs. 15 per ton. Beryl is another ore found in India. It was not much used till recently. But for the last few years it has been used for the beryllium aluminium alloys for the manufacture of aeroplanes. Hence there is a great demand in America for this ore. Due to the war and the subsequent activity in building aeroplanes the demand for this ore has greatly increased in America and few thousand tons are exported from India annually.

Gypsum which is calcium sulphate is very importtant nowadays. It is used for making plaster of paris and in the cement industry. Its other chief use will be for the manufacture of ammonium sulphate when synthetic fertilizer industry develops in India. Besides this, it can be used to manufacture cement with the evolution of sulphur dioxide. It can be used to manufacture sulphuric acid. India is so deficient in sulphur that gypsum seems to be the only source from which element sulphur can be extracted. Gypsum occurs in Salt Range in the Punjab, in the States of Bikaner and Jodhpore and the Himalayan area of U. P. and in some parts of southern Madras. The consumption is not large as all the uses are not yet developed. In the future the use of gypsum is bound to increase. Ilmenite is an important mineral which is a compound of iron titanium. It occurs in the form of sand on the coast of Travancore from which it is exported upto the extent of 1⅛ lakhs of tons. It is used in America for the manufacture of TIO_2 which is the best white paint material. India has no white paint material and imports it. The raw-material instead of being manufactured into white paint material is being exported at a very low price of Rs. 10 a ton. India can very well have flourishing titanium

white industry. Kyanite and sillimanite are the best refractories from which high quality fire bricks are manufactured. But at present most of this is exported, to the extent of 30 thousand tons annually. With the development of other industries local consumption may increase. Magnesite is an ore of magnesium and is found in Salem district in Madras. It is used in steel industry in the form of magnesite bricks. This also is exported to a great extent. The Indian magnesite is quite good and can suffice for the growing steel industry.

India is very rich in marble and other ornamental stones. Almost every colour of marble occurs in India. But still India imports a large amount of Italian marble and the Indian industry is not well developed, the only centre being Makarana in Jodhpore State. The other deposits in India are all unworked. Besides marble there is a tremendous amount of granite available which is not being utilized due to lack of cutting and polishing plant, while all granite things like roller and plates are obtained from abroad. India can have a very flourishing ornamental stone industry.

Important paint materials are red-oxide of iron, yellow-oxide of iron, barytes, titanium white, graphite and other colouring minerals. The colouring oxide of iron occurs in Central India, Gwalior and Rajputana. India is quite rich in this material. But they have not been utilized as yet to the full extent. India imports paints and paint materials worth about a crore and a half rupees, most of which can be manufactured in India. Monazite is a compound of thorium and cerium and occurs in the form of sand on the beach of Travancore. All of it is exported and it is utilized for the manufacture of thorium nitrate for the manufacture of mantles. India imports large amount of gas mantles. There is no industry in India using monazite

sands to manufacture thorium nitrate. India has got some phosphate deposits. Phosphate is required for agriculture and super-phosphates are used as synthetic fertilizers. This industry is not well developed in India and phosphates are not well utilized for agricultural purposes. Sulphur is very important from the national point of view as it is utilized in several key industries. But India has no large deposit of sulphur. A small deposit occuring in Baluchistan has been recently utilized to supply sulphur in this war emergency when our import has been stopped. But the amount of sulphur is neither large nor the quantity is good. To solve the problem there are three possibilities: (1) To utilize the SO_2 gas produced in the roasting of copper ore in Bihar. (2) To produce SO_2 gas by the roasting of pyrites which is found in the Simla Hills, in Sahabad district of Bihar, and in some locality of Rajputana. (3) To utilize the gypsum as a source of SO_2 gas by manufacturing cement out of it. Zircon is found as sand on the coast of Travancore. It is exported out to be used as refractories. It is used little in the country.

Among the other non-metallic minerals found in our country are diamond, graphite, salt peter. In ancient days India was a great producer of diamond, but now its annual output has declined to a lakh of rupees worth. The diamond-fields of Southern India are now closed and most of it is now produced in Central India. Rubies are found in Burma and sapphire in Kashmir, but the amount produced is small. Graphite which is used mostly for manufacturing pencils, crucibles, electrodes and other refractory materials is found in the Vizagapatam hill tracts in the Madras Presidency. The production is not large. Most of the graphite required is imported from Ceylon. Salt peter is a very important salt of potassium, which is used as a fertilizer,

for making gun-powder, and for many other purposes. It occurs in the form of effervescence in many parts of India. The annual production amounts to about 6,000 tons worth about Rs. 10,00,000 and a good deal of this is exported abroad.

The above study clearly shows that we are fairly rich in the non-metallic minerals and that we can ourselves meet most of the requirements of non-metals by the Indian industry. But till now a very detailed survey has not been carried out, and, where the deposits are known to exist much has not been done either by the government or by private enterprises to develop them. Mineral development is a costly process and involves some kind of risk. In foreign countries there are big companies which take up this risk and the State has done a lot to develop them. In India most of this mineral development is either carried out by foreign companies or by small capitalists; they do not find it worth while to pay much attention to small deposits; they only monopolize big ones. These deposits can probably only be developed with government help. Each government has to carry out a detailed survey of these deposits, to prospect all mineral resources, and to determine the exact amounts available. It will then be necessary to encourage private enterprisers to work up these mineral resources.

2. *Metallic Minerals*

Before the separation of Burma India could be called fairly rich in metals but now she is rather deficient. The important metals of modern times are iron and steel, copper, lead, zinc, aluminium, tin, nickel, manganese, silver and gold; out of these aluminium and nickel are of recent origin. Iron ore deposits are the most important metallic resources of our country.

The total amount of pig iron manufactured in India

amounts to about 15,00,000 tons valued at Rs. 10 crores, and most of it is produced in Bihar and Orissa. Most of our pig iron is utilized for the manufacture of steel, while a part of it was exported to Japan. There has been a great increase in the production of iron and steel in recent years, and with the addition of a plant in the Iron and Steel Company at Asansol the production of iron and steel has further increased. Mysore also has got a small iron and steel plant. In spite of so much production in India we still import iron and steel goods worth about Rs. 16 crores per year. We mostly use our iron for making simple goods like rails, bars, and beams while all the steel machinery and other complicated structures are imported from abroad.

At present the iron industry is concentrated in Bihar because both coal and iron ores are available there. Iron ore occurs in other provinces as well and there is no dearth of the ore, but coal is absent in other provinces, hence the only chance of developing these ores lies in the availability of cheap electric energy for electro-smelting purposes. In some of these localities hydro-electric power is available and it is possible that in the future several provinces will have their own iron and steel work utilizing this energy.

India produces about 7,000 tons of copper per annum and we import copper amounting to about 14,000 tons: the local production is enough to meet only one-third of the country's demand. Besides copper we also import brass worth about Rs. 1½ crores, which contains large amounts of copper. The electric machinery which we import in large amounts every year also contains a lot of copper. The annual requirement of copper in India amounts to more than 3 crores of rupees worth; at present we mine our copper from Singhbhum District in Bihar, but the deposits in Sikkim, Garhwal and Almora in U. P., and those

in Madras, deserve careful prospecting; with proper attention we can supply a large portion of our demand for copper.

Lead is not produced in India proper but it occurs in the Shan States (Burma) and about 75 thousand tons of lead costing one and a half crore of rupees are produced every year. Lead is required for several industries. In ammunitions, for example, it is needed for making bullets. Galena, the ore of lead, is known to exist in several places in India but in order to develop them much scientific prospecting is necessary. There is no source of zinc in India proper but in northern Shan States in Burma, zinc ores occur with lead, and the production of zinc there is valued at Rs. 3 lakhs every year. The import of zinc into India in 1936-37 amounted to 22,000 tons valued at Rs. 48 lakhs. Recently under the stress of war several deposits of lead and zinc have been prospected in Rajputana and other parts of India.

India does not produce much aluminium at present. Our imports total about Rs. 50 lakhs per year. Under the stress of war two aluminium factories have been started, one at Asansol another in Travancore. India is, however, very rich in aluminium ores. A large amount of bauxite occurs near Ranchi and Palamau districts (Bihar), Balaghat district and near Katni in C. P. In order to extract aluminium from bauxite we need cheap electric power. This cheap electric power is available in Bihar from cheap coal and in Travancore from water in the form of hydro-electric energy. The present normal world price of aluminia is about Rs. 1,300 a ton while in India we can easily manufacture it at Rs.800 a ton. The apathy of the government has to some extent been responsible for the lack of development of this industry. Aluminium can be used in aeroplanes, buildings, and for making utensils. We will save other metals in which India

is short if we use aluminium for all these various purposes.

India possesses no known deposits of tin and nickel. In 1933 tin was produced in Burma to the extent of 4,000 tons valued at about Rs. 60 lakhs; small quantities of nickel are also obtained in Burma as by-products in the extraction of other metals. Some deposits of tin probably exist in Bihar, but no proper prospecting has yet been made. India uses large quantities of nickel (for coins and as german silver) and tin; efforts to trace their existence in India are worth making.

India produces every year about 3,50,000 ounces of gold valued at about 3 crores of rupees; most of this gold comes from the Kolar fields in Mysore State, where the mines have reached a depth of 7,500 feet. Gold is also found in small amounts in some other provinces, but these deposits are not being worked on scientific lines. There are no known deposits of silver in India, but a small amount of it is obtained as a by-product in the extraction of lead and zinc in Burma, where the production amounts to about 60,00,000 ounces valued at about Rs. 75 lakhs. In the Kolar Gold Fields in Mysore about 22,600 ounces of silver are produced valued at about Rs. 31,000. This amount can be increased if proper care is taken.

The other metals of industrial importance are manganese, chromium, tungsten. These are often used for making alloys. India is very rich in manganese ores which are mostly used for making alloy steels: manganese is not used much in India, and it is exported to the extent of 10,50,000 tons. We can very well try to utilize our supply of manganese by making alloy steels here. Chromite ores are also used in the manufacture of high quality alloy steel. India is a good producer of chromium and its ores. The average amount of this ore produced per annum during the last ten years amounts to about 50,000 tons valued at about

Rs. 6 lakhs. Tungsten is also used in high quality steel, about 95 per cent of the world supply being used for this purpose. Burma produces this metal, the annual supply being valued at Rs. 1,400,000. With all these minerals India is quite self-sufficient for the manufacture of up-to-date weapons of national self defence.

Two points stand out clearly from this analysis. In India we have not utilized our metallic minerals, except iron and steel, to our best advantage. We export most of them in the raw stage. Secondly, the metal supply of Burma is indispensable for the future progress of our country. Hence, it is necessary that we should win back Burma and conclude a trade agreement with it for a continuous supply of metallic resources. It should be possible to develop the metallic industry in India with proper thought and care.

3. *Fuels*

At present the most important fuels are coal and petroleum. Wood and charcoal are also used but to a small extent only. Electric energy, which is used for the production of heat, is generated either by coal, or petroleum,or by falling water.

The annual production of coal in India amounts to about 2½ crore tons. of which about 82 per cent is produced by Bihar and Bengal. Jharia coal fields (Bihar) supply the best quality of coal. The important mines are those of Jharia (producing about 80 lakh tons every year), Ranigunj (2 lakh tons), Daltonganj and Giridih (20 lakh tons), and Hyderabad (5 lakh tons). The Punjab and Baluchistan produce coal of an inferior quality in small amounts. India produces a large quantity of high quality coal, but the trouble is that all this coal is concentrated in one region, i.e., in the fields of Bengal and Bihar. Sometimes coal has to be carried more than a thousand miles from this centre. The

coal costs about Rs. 4 a ton at the pit mouth, but when it reaches the place of consumption, its cost sometimes becomes as high as Rs. 20/- a ton. In the far off provinces like Sind the price is very high. The freight charges are prohibitive. The chief outlet of coal from Bihar and Bengal coalfields by the sea is the Calcutta seaport. Out of the total production of coal in India the railways consume about 70,00,000 tons, the iron and steel industry 40,00,000 tons, thus making up 50 per cent of the total coal output of India.

All the industries directly connected with coal have not yet been developed in India. The Tata Iron and Steel Company and a few other firms manufacture hard coke, about 20,00,000 tons of coal being used to produce 15,00,000 tons of hard coke. Soft coke is produced in the Bihar fields to the extent of about 8,00,000 tons every year. This soft coke is used now in different provinces as a domestic fuel. The total reserve of coal in India amounts to about 4,500 million tons out of which 1,700 million tons are coking coal and the rest is non-coking coal. This amount of coal with the present rate of production will last for about 225 years, but it is very likely that with the industrial development of the country the consumption will increase much more and will easily go four times. Coal can be used in many ways : it is possible to develop coal distillation industry and dye-stuffs industry from its by-product tar. Synthetic petrol and synthetic fertilizers can also be manufactured out of coal, while electric energy can be generated. The inferior quality coal, now being produced in the Punjab and Baluchistan, can easily be turned into producer gas and electric energy ; and these can be used for several purposes for which good quality coal is required such as the production of heat in the furnaces. Our coal resources though limited are fairly good for our own use. The development of hydro-

electric energy, for which there is a great scope in our country, is likely to displace a good deal of coal consumption in India; the irreplaceable requirement of coal will probably only remain for reduction purposes in the form of coke in the metallurgical industry. As the coking coal reserves are limited it is necessary to save as much coal as possible.

The liquid fuels are mostly used as a source of light, heat and power. In the last century the chief use of kerosene, which was then considered to be the most efficient fuel, was to produce heat and light. In recent years owing to the development of automobile and aeroplane industry the importance of petroleum has been tremendously increased. India is not a good producer of petrol but Burma produces large quantities of it. The production of petrol in India and Burma is about 30 crore gallons or about 12 lakh tons valued at about Rs. 3½ crores. The total world consumption of petrol per year amounts to about 200 million tons of which India supplied only 0·6 per cent. The Indian oil fields are situated in Assam (viz., Digboi fields) and the Punjab (Attock oil fields); besides these prospecting is being carried out in Sind and the Frontier Province. India imports every year about 13 crore gallons of fuel oil (worth about Rs. 2 crores), 6 crore gallons of kerosene (worth Rs. 2 crores), and one crore gallons of petrol (costing Rs. 35 lakhs). The demand of petrol is likely to increase in the future. We do not produce a sufficient quantity of it. The war has fully demonstrated our helplessness as regards petroleum. Hence every offort has to be made to economize its use. This can be done in various ways. We can mix up petrol and industrial alcohol for use in the automobile engines. We can manufacture alcohol out of molasses, and efforts have already succeeded to this end in our country. Power alcohol is being manufactured in U. P. and Mysore

and is being mixed with petrol to the extent of 20 per cent. This will reduce to some extent our dependence on foreign petrol. Besides this attempts can be made to manufacture synthetic petrol out of coal: under the present methods of manufacture one ton of coal produces roughly about 50 gallons of petrol. This synthetic petrol is quite good for aviation purposes and it will cost about 5 annas a gallon with coal at Rs. 4 per ton. We can also utilize vegetable oils for the purpose of producing power. Further, producer gas made from charcoal can substitute petrol for automobile propulsion. This is being done in India under the stress of war at present. This was already being done in France. India, a poor petrol producer but rich in charcoal, had to explore these possibilities now, which it neglected before the war.

India is very poor in gaseous fuels. Natural gas occurs mostly near the oil-fields. It is found in Burma but not much in India; there are some places where gases occur underground but the amount is very small and it has not found industrial use as yet. In other countries artificial gases from coal distillation have been utilized for motor propulsion by filling it in cylinders and by having regular stations for supply; but in India large amounts of it are wasted in the manufacture of soft coke; nothing has been done to find a way to utilize them.

Power is mostly derived either from coal, oil, or water-falls. There are several coal fields in India which are situated away from the railways and they have not yet been touched due to the lack of transportation facilities. It should, however, not be difficult to turn this coal into electric energy and then to transmit it to places of consumption. If this is done a great deal of coal, which under the present conditions cannot be utilized at all, will become available for use. If a complete

system of electric grids from hydro-electric sources as well as from coal-mines is brought into existence it may be possible to supply electric energy to the whole of northern India, from Assam to the end of the Doab at cheap rates. In Bengal and Bihar there is no difficulty in the way of grids from the coal fields, while the U. P. can have its Eastern Grid from the coal fields situated in the Rewa State, 90 miles south of Mirzapur and the Western Grid from the Himalayan Waterfall sources, and save a large amount of coal. Central Provinces can have the Grid system from coal resources, while Bombay and Madras can have it from hydro-electric sources. With a proper system of grid it should not be difficult to supply power to every part of India at about 6 pies per unit. The Punjab can have its electric grid from Mandi scheme and other Himalayan sources on the Eastern boundaries of U. P. where it is expected that 75,000 K. W. will be generated , and so whole of Northern India can be linked up in a connected grid. In India there is a large scope for the development of hydro-electric energy but till now very little of it has been harnessed. The chief centres of development of hydro-electric power at present are :—

1. The water-falls of western U. P.
2. Mandi Hydro-electric scheme of the Punjab.
3. The Tata and Andhra Valley schemes in the Bombay Presidency.
4. The Mettur in Madras and the Kaveri fall scheme in Mysore State.
5. Jumna scheme (recently decided by U. P. Government).
6. A few other minor schemes.

There is a tremendous amount of electric energy available in the Himalayas, but very little of it has yet been tapped. Recently the U. P. and the Punjab Governments have decided to construct dams on Tons

and Giri, tributaries to the Jumna. It is proposed to generate by stages roughly 75,000 kilowatts of hydro-electric power on these two dams.

A hydro-electric survey was created by the Government of India in 1919, but with the advent of provincial autonomy it was dissolved. Full information, therefore, is not available about the power resources. Each province has to organize its hydro-electric survey either under the irrigation department or under a separate department in order to make a detailed study of the total water power available. When such reports are available, programmes for their development can be drawn up so that, in due course the coal power may be displaced by hydro-electric power. This energy, besides supplying power to many existing industries and railways is utilized for electro-smelting works as well. Many of the ore deposits lying away from the coal centres cannot be utilized at present, but with the supply of cheap electric power it will be possible to reduce these ores to their respective metals. Cheap electric power will greatly facilitate the growth of the aluminium industry and its alloys, the manufacture of synthetic fertilizers and the working of electro-chemical and electro-metallurgical industries. Cheap electric power will also be of great help to the rural masses of our country as it can be used for tube-wells and for the purpose of starting small scale cottage industries. The total amount of water power developed in India at present is about 5 lakhs of kilowatts, while the power developed from other sources amounts to about 2 lakh kilowatts. This 5 lakh kwts. of water power is equivalent to about 50 lakh tons of coal or about 20 per cent of the total amount of coal produced in this country.

CHAPTER IV

MINERAL RESOURCES AND DEVELOPMENT[1]

By M. S. KRISHNAN M.A., PH.D., F.N.I.
Geologist, Geological Survey of India

We often hear exaggerated statements made about the enormous mineral wealth of India by persons not quite conversant with facts. This is mainly due to the absence of sufficient publicity on matters relating to statistical data on various aspects of India's resources. It may be stated, however, that India is reasonably well endowed with many useful minerals and has, at the same time, certain important deficiencies. But no country in the world, not even the U. S. A. or the U. S. S. R., is entirely self-sufficient being dependent on others for some of the requirements.

Information on the mineral wealth of India is available only in a general way, details lacking in most cases.[2] The work done so far, except in some cases, may be described as exploratory, and information on the grades

[1] Published with the permission of the Director, Geological Survey of India. The Department, however, is not responsible for the analysis offered in this chapter. It is a private contribution of the Author.

[2] Annual and quinquennial reviews of the Mineral Industry of India are published in the "Records of the Geological Survey of India," available from the Central Government book depots or from the Geological Survey Office, 27 Chowringhee Road, Calcutta. A general review of mineral resources is given in "India's Mineral Wealth" by Dr. J. C. Brown, Oxford University Press, 1936, and in "Indian Mining" by J. A. Dunn, Calcutta, 1943.

and quantities of minerals even in well-known deposits is far from satisfactory. Only a few small areas in this country may be said to have been examined by geologists in a fairly detailed way. There are large regions, the detailed geology of which is not known, while in the case of some areas in Orissa and Assam even general information is lacking. It will be realised, therefore, that much remains to be accomplished before we can be in possession of comprehensive and detailed information about our mineral resources.

An attempt is made in the following pages to review briefly the known resources and examine the possibilities of their development in future in view of the need for general industrialisation of the country.

Mineral Fuels

Coal, petroleum and natural gas are called mineral fuels as they are used as sources of heat and power for industrial purposes. India's resources in coal are moderate but those in petroleum and gas are quite poor.

Coal. The coalfields are concentrated in Eastern India, but there are deposits of small size in Rajputana, the Punjab, Kashmir, N.W. Frontier Province and Baluchistan. These outlying deposits generally contain poor quality coal which can have only local importance.

The coals are of two distinct geological ages. The earlier ones, of Gondwana age, were probably laid down some 200 million years ago and have attained a higher degree of maturity and carbonisation than the later coals, of early Tertiary age, formed about 50 million years ago, which are less matured and often lignitic in character. The coals in North-Western India and in Upper Assam are of the latter age, and amongst them the Assam fields yield the best materials. The Gondwana coalfields are located along three narrow zones, one along the Damodar-Son valleys, the second along the Mahanadi

and the third along the Wardha-Godavari valleys, in the Provinces and States of Bengal, Bihar, Orissa and the Central Provinces.

The Gondwana coalfields[1] have been estimated to contain a total of 60,000 million tons of all qualities of which the workable deposits, *i.e.*, those of 4 feet thickness and over, amount to 20,000 million tons. Good quality material having a maximum of 16 per cent. ash content and within a depth of 2,000 ft. from the surface, amounts to only 5,000 million tons. Coal useful for conversion into hard coke for metallurgical purposes, usually known as caking or coking coal, is confined to the Jharia, Raniganj, Bokaro, Giridih (and perhaps Karanpura) fields, whose total yield may amount to 1,500 million tons. Three-fifths of these reserves are in the Jharia field and a fifth in the Bokaro field.

No reliable estimates are available regarding the reserves in the Tertiary coalfields but they may perhaps be put down at round 3,000 million tons, the greater part of which occurs in Assam. Most of the Assam coals are of fairly good bituminous quality, some being coking coals. In some fields, however, the coal contains much sulphur and it will be necessary to devise processes for purifying it in order to make it generally useful.

Some of the coalfields in Central Provinces and in the Godavari valley remain to be investigated in detail in order to assess their importance. It is, however, unlikely that they will add much to the reserves or contain enough high grade coal to alter the unsatisfactory position regarding the coking coal reserves.

The present annual production of coal is of the order of 25,000,000 tons, but with reasonable facilities

[1] C. S. Fox., The Lower Gondwana coalfields of India, Memoirs, Geological Survey of India, Vol. 59, 1934. See especially chapters XVIII and XIX. *Also* Report of the Coal Mining Committee, 1937.

this can be improved considerably. The whole production, except for a few lakhs of tons, is used within the country, the approximate consumption by different industrial groups being as shown below:—

	Per cent.
Railways	32
Iron and steel, engineering shops and foundries	22
Cotton and jute mills	10
Bunkering	5
Inland steamers	3
Cement, ceramics, bricks and tiles ...	4
Collieries and wastage	10
Other industries	14
	100

Nearly half the total production is coal of coking quality, of which only a third (about one-sixth of the total) is used for metallurgical purposes. Much coking coal is, therefore, unnecessarily used for steam raising and ordinary heating which can be done equally well by coal of lesser grades. At the present rate of consumption it is doubtful if the coking coals will last for even half a century. The employment of coking coal for other than coke-making for metallurgical purposes is regrettable because India possesses very large reserves of high grade iron ores which will require much more coking coal than is available in the country even if all the coking and semi-coking coal is used strictly in metallurgy alone.

Coal mining is still done rather wastefully. Measures have recently been taken by the Government to put out fires in the mines and to help companies to stow worked-out portions with sand. If these measures are extensively used, we shall be able to recover a high percentage of the coal remaining underground.

A large amount of second class coal is used for

making 'soft coke' in a primitive way, with the loss of all the valuable volatile substances contained in the coal. Perhaps one and a half million tons of coal are treated this way annually. It should be possible to recover the byproducts and use them in subsidiary industries.

Complete data on the characteristics of the individual seams even in well-known fields like Raniganj and Jharia are lacking. We are, therefore, still in the dark as to which fields and seams contain coals suitable for hydrogeneration and production of synthetic motor fuel and for other purposes. Suitable coals should also be located and steps taken to establish a coal-tar and dye industry which can provide the country with a host of useful substances. This can be done systematically only by a Fuel Research Institute, the establishment of which at a very early date is a desideratum.

Petroleum. The only oil-producing areas in India are in Upper Assam and in the Punjab, which together have an output of some 80 to 90 million gallons of crude oil per year. The production of Burma is about thrice that of India. That the Indian production is insignificant will be apparent from the fact that it represents only 0·1 per cent of the annual world production of over 280 million metric tons (one metric ton=1000 kilograms or 2204 lbs., which will measure roughly 249 Imperial gallons). It is entirely inadequate even for our own needs, for in 1938 we imported 188 million gallons of kerosene (Rs. 691 lakhs), 135 million gallons of fuel oil (Rs. 194 lakhs), 36 million gallons of lubricating oils (Rs. 230 lakhs) and 53 million gallons of motor spirit (Rs. 222 lakhs), having a total value of over Rs. 13 crores. It should be possible, by research, to manufacture synthetic motor fuel from coal and reduce the imports appreciably. In this connection it may be noted that during the last decade numerous plants have been put into operation for the production of synthetic

motor fuel based on coal in England, Germany and Japan and, even as early as 1935, Germany was beginning to meet a part of her consumption of motor fuel from such newly established Plants.

Natural gas is not produced in India separately and distributed by pipe line as is done in America. Some quantity is used near the wells, but much of it finds employment in maintaining pressure in the producing oil sands, and occasionally for the extraction of petrol from it to a limited extent.

The oil companies have done a considerable amount of prospecting for discovering new oil fields, but apparently without much success so far. It is not known what reserves can be expected in the producing oil fields but we may assume that they may continue production for about 20 years.

Metallic Ores

India is well endowed with iron and steel making materials and the development of the steel industry may be expected to result in her being able to supply neighbouring countries with iron and steel in the near future. She has some resources in copper and perhaps zinc, but practically none in lead, nickel, arsenic and some others. Intensive prospecting over the length and breadth of the country may result in the discovery of some useful deposits though no spectacularly large deposits are likely to be found.

Iron. For some centuries even before Christ, India has been famous for her manufactures of iron and steel. The steel articles and weapons of Indian manufacture usually found their way to the Levant through Damascus. The metal used to be manufactured in a primitive way in small furnaces using easily accessible ore and charcoal fuel. Even in the latter part of the last century there were many thousands of furnaces

scattered over many areas, producing in the aggregate perhaps a few hundred tons of steel a year. This industry has now practically died out in face of mass-produced metal which has become available even in bazars in the interior of the country.

Attempts were made about a century ago by Europeans to manufacture iron in blast furnaces in the Salem, Arcot and Malabar districts of Madras, in Birbhum in Bengal and in Kumaon, in the Punjab Himalayas, but they all proved failures, in spite of the help extended to them by the East India Company. The only survival from the early attempts was the Barakar Iron Works, which were taken over by Messrs. Martin & Co. of Calcutta in 1889 and remodelled. This later became the Bengal Iron Company, recently amalgamated with the Indian Iron & Steel Company. This was using the iron-stones of the Raniganj coalfield as ore until about 1909 when the rich hematite ores of Singhbhum were discovered and opened up. The Tata Iron & Steel Co. was floated in 1907, and after carrying out extensive prospecting, built furnaces at Sakchi (now Jamshedpur) near Kalimati railway station (now Tatanagar). Iron and steel were produced in their works for the first time early in 1912. The Company has developed spectacularly during the 30 years of its existence and has the distinction of its steel works being the largest single steel plant in the British Empire. The Indian Iron & Steel Company was floated in 1918 while the Mysore Iron Works started production in 1923 in a blast furnace using charcoal fuel. Since 1936 it is producing steel. The Steel Corporation of Bengal is the latest addition to steel producers, and is in production for the last 5 years. Minor producers are the National Iron & Steel Company near Calcutta and a few others. There are also several foundries and rolling mills fabricating iron and steel articles.

The richest ore fields in India occur in Bihar, Orissa and Central Provinces in the districts of Singhbhum, Chanda and Drug, and in the States of Mayurbhanj, Bonai, Keonjhar and Bastar. These deposits contain something like, 4,000 million tons of high grade ore (with over 60% iron content) and perhaps twice or thrice that quantity of lower grade ores. The most accessible deposits in Mayurbhanj, Singhbhum and Keonjhar are now being worked. The deposits of Bastar, Chanda and Drug, being farther from coal deposits, will probably require special effort to be developed.

The iron-stones of the Raniganj coalfield, which were formerly smelted by the Bengal Iron Company, contain 35 to 45 per cent. of iron and have reserves of perhaps 400 million tons of ore. The hematite and magnetite ores of the Mysore State amount to several hundred million tons of which some 100 million tons are high grade. There are several deposits of banded siliceous magnetite ores in the Salem and Trichinopoly districts of Madras which contain several hundred million tons of an average tenor of 35 to 40 per cent. iron. These are, however, amenable to magnetic concentration after crushing, whereby the grade can be considerably improved.

A number of other deposits, mostly of smaller size, are known in Madras, Hyderabad State, Central Provinces, Simla Hill States, and elsewhere. Some of these may contain enough ore to warrant smelting on a small scale.

In addition to these, there are enormous and almost inexhaustible quantities of laterite in various parts of the country, containing 25 to 40 per cent. or more of iron and varying amounts of aluminia and manganese. At some future date these may possibly serve as sources of iron as a result of technological advancement.

The ore reserves estimated for most of the deposits represent the results of surface examination and assumptions of dimensions on a conservative basis so that, in actual working, the deposits may be expected to be larger. It may be feasible to use coke fuel only in the case of the ores of Bihar, Orissa and Central Provinces for these are the only ones within a distance of 300 to 400 miles of the coalfields containing coking coal. As already remarked, the whole of the available reserves of coking and semi-coking coals are inadequate to smelt these ores. But even these slender reserves are being depleted at a rapid pace. In addition to enforcing some measure of control over the use of coking coal, it will be necessary to undertake research on the possibility of converting non-coking into coking coals, and on new methods of smelting such as the use of gas made from inferior coals.

The iron ores of South India and those which are far away from sources of suitable cheap coal may have to be smelted by electricity, the actual reduction of the ore to metal being carried out by charcoal. Electrical power for smelting purposes will have to be particularly cheap, say about 1 pie (0·084 anna) per Kilowatt-hour. Pig iron made in the electric furnace is much costlier than the blast furnace product and hence it is best to convert it into steel (including special alloys) in which case the manufacture would be profitable.

The production of pig iron in India before the War was around 1·5 million tons of which about a third used to be exported, mainly to Japan, and also to England and the U. S. A. The steel production was also reaching upto 1·5 million tons. Since then, the manufacture of ferro-alloys has been started and special steels for armaments and other purposes have been made. Acid steel for railway axles and tyres is also being manufactured now. The current production of steel must

be much higher than that of 3 years ago and it is to be hoped that the availability of alloy steels will soon lead to the manufacture of locomotives, automobiles, and heavy machinery. Since the annual import value of iron and steel articles including hardware, cutlery, structural materials, machinery is of the order of Rs. 25 crores or more, there is great scope for the expansion of the steel industry during peace time, especially as the raw materials are available in the country.

Manganese. Manganese is added in small quantities to pig iron and steel and is also an important alloying element when used in large quantities. Certain suitable ores are also used in the manufacture of chemicals and in dry cell batteries.

For over half a century India has been an important supplier of manganese to the world, competing for the first place with Russia and Brazil. The deposits occur in Bombay, Central Provinces (Nagpur, Chhindwara, Bhandara and Balaghat), Singhbhum, Orissa (Gangpur, Keonjhar, Bonai and Ganjam), Madras (Vizagapatam and Sandur) and Mysore. The best ores are those of the Central Provinces which are also responsible for the major part of the country's output which ranges, in normal times, between half to three-quarter million tons per annum. From the commencement of manganese ore-mining in the early nineties of the last century upto 1938, something like 25,000,000 tons of good manganese ore, averaging perhaps 45 to 48 per cent. have been produced in India, by far the greater part of which has been exported. Only a small percentage of the production is retained in India mainly for consumption in the iron and steel industry.

Though the manufacture of ferro-manganese has been carried on in India for several years it has been used only for local consumption. It is a pity that so much good ore should have left the country in the raw

state, generally at low prices, without any sustained effort to convert it to ferro-manganese for export, in spite of what Sir Thomas Holland wrote nearly 40 years ago.[1]

> "One cannot help the feeling of regret that the whole industry (manganese mining industry) is at present equivalent to a heavy loss to the country. The ore exported is worth perhaps Rs. 30/- a ton in the country to which it is sent; this country gets out of it merely the margin left after paying the heavy freight charges, and possibly Rs. 15 per ton can be regarded as the profit to India, divided between the railways, the miners and the owners of the land. At the same time India has to pay the foreign manufacturer's profits and the cost of return carriage for the manganese brought back in the form of steel. If a flourishing steel-manufacturing industry existed in the country, much of the manganese would be retained in India and the lower grades ore also would be economically developed."

Chromite. This mineral is the principal source of chromium which is an important ingredient in stainless steels. It is also used in dyeing, tanning, chrome-plating, manufacture of chemicals and refractory bricks.

The chief deposits are in the Mysore State, in Baluchistan and in the Singhbhum district of Bihar. Recently, some occurrences have been developed in the Kistna district of Madras. The annual output has fluctuated widely but may be taken at 40,000 tons. The greater part of the total output is exported, though chromium chemicals for the dyeing and tanning have to be imported. A part of the production is used in India for making refractory bricks. Recent developments include the manufacture of ferro-chrome and alkali bichromate.

No reliable estimates have been made of the reserves

[1] "Review of the Mineral Prodution of India during 1898 to 1903"—Records, Geological Survey of India, vol. XXXII, p. 62, 1905.

of chrome ore in the various deposits. The reserves are, however, expected to last for several years at a moderate production, but it will be necessary to examine the question whether unrestricted exports should be allowed to continue.

Other Ferro-alloy metals. Several other metals—nickel, cobalt, titanium, vanadium tungsten, molybdenum—enter into the composition of alloy steels used for a great variety of purposes. No useful deposits of nickel are known in India. Cobalt ores are known in Rajputana and Nepal, the former being unimportant and the latter inaccessible. Titanium can be derived from ilmenite found on the coast of Travancore or from titaniferous iron ores in several places. Only very small deposits of tungsten (used especially in steel tools working at high speed) are known in Rajputana and Bihar, but most of the world's requirements in normal times are supplied by China and Burma. Deposits of vanadium-bearing iron ores have been located in the Mayurbhanj State and Singbhum, probably large enough to supply all the needs of India. Molybdenum ore has been noted in a few places but not in deposits of any useful size. On the whole, India's resources of iron and steel-making materials are good, especially as there are abundant iron manganese and chromium ores. The deficiencies in some of the alloying elements can be made up by imports; indeed, no country in the world is self-sufficient in all of them.

Common Metals. Under this general term we may group copper, lead, zinc and tin. They find a variety of uses in peace and war and are amongst the most essential metals in modern civilisation. Copper ore deposits are known in Bihar, Madras, Rajputana, Sikkim and a few other places in the Himalayas. Of these, the Bihar deposits are the only ones which have been producing regularly. The Sikkim deposits

are workable provided transport difficulties are overcome. The others deserve detailed prospecting so that their possibilities can be known with some precision.

The annual production of copper (metal) in India is about 7,000 tons, worth about Rs. 45 lakhs. The consumption being much larger than this, it is necessary to import copper and copper alloys (excluding that in electrical machinery) of the annual value of Rs. 170 to 200 lakhs.

Lead ores are known to occur in many places especially in Bihar and Central Provinces, but none of the deposits so far known is of importance. Ores of zinc are less common but the prospecting work now being carried out in the Mewar State of Rajputana will show whether the ores are rich enough to be worked on a decent scale. No deposits of tin are known. It is of interest that the Bawdwin mines of Burma are large producers of lead and zinc, while Burma, Malay States, Siam and the East Indies are the most important sources of tin in the world.

The Precious Metals. Gold has been won in India for centuries both by washing river gravels and alluvium and by mining, of which there are numerous relics in Madras, Mysore, Hyderabad and Bihar. Gold-bearing vein deposits occur in the above-mentioned areas and some of them have been examined in some detail. There was a gold boom in India in the eighties of the last century which resulted in the floatation of numerous companies for working gold in the Wainad region of Madras and in Chota Nagpur but practically all the companies came to grief probably because the ores were inadequately prospected and the companies lacked the capital necessary to sustain them over a prolonged period of investigation and development. Gold mining is now carried on only in the Kolar gold fields of the Mysore State where four companies

work a reef which is 5 miles long and some 3 feet wide on an average. The reef has a very steep inclination and is being developed now at a depth of 8,000 ft. vertical depth from the surface. The average tenor of the ore is 8 to 10 penny weights (dwt)[1] of gold per ton. The importance of this industry to India can be gauged by the fact that the total value of gold produced between 1892 and 1938 was over £86,000,000 of which £25,000,000 have been distributed in dividends and £4,500,000 paid as royalty to the State.

Mining has been done also in the Hyderabad State and in the Anantapur district of Madras. Interest is again being shown in the Hyderabad and Wainad deposits. Detailed prospecting is likely to result in the location of some workable deposits. The Indian production is of rather minor importance to the world, for it is only about one-third of a million fine ounces per annum, whereas the total world production is around thirty million ounces, two-thirds of which is contributed by South Africa, Canada, U. S. A. and U. S. S. R.

Only an insignificant quantity of silver is produced—about 25,000 ounces—as a byproduct in the refining of gold in the Kolar goldfield. The platinum metals have not been produced in India. In other parts of the world they are derived either from alluvial deposits or are associated with nickel ores.

The Light Metals. Two metals, namely, aluminium and magnesium, have recently come into great prominence because of their lightness, their specific gravities being 2·6 and 1·74 respectively. These metals and their alloys are finding increasing use in air-craft construction where the reduction of dead-weight to a minimum is of prime importance. In peace time they find employment

[1] 1 oz. (troy)=480 grains=20 dwt; 1 dwt=24 grains; 1 oz. (avoir)=437.5 grains; 1 lb. (avoir)=7000 grains.

in transport vehicles and engineering structures which result in important savings in other directions. Iron is 4 times and copper 5 times as heavy as magnesium, which will give an idea of the saving in dead-weight which can be secured by the utilisation of the light metals. A third metal, beryllium, is also light (specific gravity 1·85) but its manufacture is limited by the rarity of the ore.

Though aluminium is the most abundant metal in the earth's crust, it is difficult to extract. The chief ore is bauxite, which is a form of laterite rich in alumina. At present a high grade bauxite, containing 55 per cent. or more of alumina, is insisted upon for the preparation of pure alumina which is later electrolysed in a molten bath of sodium-aluminium fluoride. Efforts are now being made in America to utilise lower grade siliceous bauxite for this purpose.

India has large deposits of bauxite of good grade mainly in Bombay and Central Provinces. Other deposits are known in Orissa, Bihar, Kashmir and Madras. Until a few years ago Indian bauxite was used only for filtration of oil and in making refractory bricks and special cements.

Efforts have been made in the past to start an aluminium smelting industry in India but it was found impossible to do so without the active help of one or other of the important companies which formed an international association and controlled all the patents and the markets. Just before the present War, arrangements were in progress in Bengal to erect a factory near Asansol with the help of the great Skoda Works in Czechoslovakia, but before all the machinery could arrive that country was occupied by Germany. It is learnt that further progress has been made by that factory to obtain the necessary machinery from England and America. About the same time, the Aluminium Corporation of India, representing British and Canadian interests,

began investigating the possibilities of producing aluminium in India. This concern has established reduction works in Travancore and began producing aluminium early in 1943.

India has had an aluminium fabricating industry for over three decades but it has depended on imported aluminium sheets, bars, and rods which were merely fabricated into articles for which there was a demand in this country. The establishment of an aluminium producing industry in India is an important step in the industrialisation of the country which should be logically followed by the manufacture of magnesium and of light metal alloys.

The chief sources of magnesium are magnesite and dolomite (carbonates) and sea water. The metal is nowadays being extracted from all these sources. The processes include electrolysis of used salts and smelting with the help of a reducing agent.

India possesses excellent deposits of high grade magnesite in Mysore and the Salem district of Madras, dolomite in many places, and a long sea-board from which to take sea water. No attempt has so far been made to take up the question of the manufacture of magnesium. The magnesite deposits are exploited at present partly for export and partly for making refractory bricks, the annual output being of the order of 10,000 to 20,000 tons.

The manufacture of aluminium and magnesium has increased several-fold during the past few years. Plants are being vigorously built especially in the U. S. A. and Canada to increase the output still further, the respective Governments financing the projects. These metals are bound to play a large part in the future in structural, transport and aeronautical engineering, and any plan for industrialisation of India must make provision for the manufacture of these metals and their

alloys on a large scale.

Beryllium is similar to magnesium and aluminium in being light and requiring also the same type of processes of manufacture. Before the War, only Germany and U. S. A. manufactured the metal. It is doubtful if this metal can be introduced in large-scale manufacture, for the supply of the ore from all sources in the world is never likely to exceed a few thousand tons a year. The tendency in future will be to restrict its use to very special purposes.

The mineral beryl (the ore of beryllium) is found in small quantities in certain rocks which generally contain mica deposits. The annual production in India may not exceed a few tons and that only as a byproduct of mica mining though, when large crystals are encountered, the output may rise to a few scores of tons.

The Non-metallic or Industrial Minerals.

In this group are included various miscellaneous minerals which are not used as sources of metals, and hence the name non-metallic minerals.

Mica. Perhaps the most important mineral in this group produced by India is mica, which is indispensable to the electrical industry as an insulator with unique properties. Mica includes a few species of which two muscovite (potash mica) and phlogopite (magnesian mica), have great commercial importance. Most of the mica produced in India is muscovite, a small quantity of phlogopite being produced in Travancore.

The chief producing areas are Bihar (Hazaribagh, Gaya and Monghyr), Madras (Nellore and Nilgiris) and Rajputana (Mewar, etc.). Bihar mica has a reddish colour for which reason it is referred to as 'ruby mica' while Madras mica is mostly pale green in colour. Phlogopite is often called 'amber mica' because of its amber colour.

The total *recorded* Indian production is 6,000 to 7,000 tons per year, but the export figures are always very much higher and amount to nearly 10,000 tons. Practically the whole of this is exported and the consumption within the country is negligible. There is a considerable industry abroad in which thin films of mica are pressed together with shellac or some other suitable binding medium and made into shapes required by the electrical industry. Such material, known as *micanite* is now manufactured on a small scale in Calcutta. The consumption of mica in India will increase only if the manufacture of electrical machinery is undertaken on a large scale.

The mica deposits are still being worked at shallow depths, the majority of the workings being open-cast quarries. There is much scope for expansion of this industry especially if the deposits are carefully and systematically worked with a view to maximum extraction.

Refractories. Materials which can resist high temperatures without softening or melting are called refractories. They are used for lining industrial furnaces in which various substances are melted or heated. They comprise fire-clays, silica, magnesite, chromite, graphite and certain aluminium silicates called sillimanite and kyanite. India is well supplied with most of these. Fire-clays occur in some of the coalfields and elsewhere. The occurrences of magnesite and chromite have already been referred to. Deposits of graphite occur in Orissa, the Eastern Ghats and Travancore. Large occurrences of kyanite are known in Bihar and of sillimanite in Assam, the former being worked for export.

There is a growing refractory industry in India which is meeting practically the whole of the local demand. There is need for developing particularly higher grade refractories such as those required by the

glass industry. These can be made from kyanite and sillimanite of which there are apparently good reserves.

Ceramic and glass materials. Clays of various grades are known in the country, including kaolin, fire-clays, pipe clays, and those for making terra cotta and ordinary bricks and tiles. China clay (kaolin) occurs in the Rajmahal Hills, Singhbhum, Delhi, Kathiawar, Jubbulpore and Travancore. The last mentioned (Travancore) deposits are apparently of large size and capable of considerable development. Fuller's earth is produced in Jubbulpore and in the Bikaner, Jodhpur and Khairpur States. Ordinary clays are very widely distributed and extensively used for making bricks, tiles and village pottery.

Modern stoneware and pottery industry is rapidly growing in India and its requirements of raw materials are bound to increase greatly in the future. Mining of clay is carried out generally in a very wasteful manner. It is, therefore, necessary to exercise control over it so as to minimise unnecessary waste. High grade, pure white China clay is required by the paper and textile industries which still import some quantity from abroad. With greater organisation of the Indian producers, it should be possible to increase the manufacture of all grades of clay products.

Felspar and quartz are also used in ceramics. These are so extensively distributed in India that it is merely a matter of developing mines at suitable localities and making arrangements for proper distribution of the minerals at reasonable rates.

A glass industry is now fairly well established in India producing inferior varieties, including those for making bottles and bangles. The industry was recently helped by the Industrial Research Bureau to improve its furnaces and processes. Within the last few years high grade laboratory glassware has been manufactured

in Calcutta. There is still considerable scope for expansion in all branches of glass making, especially tableware, cut glass, laboratory ware and optical glass, as the value of the annual imports of glassware is of the order of one crore of rupees.

Glass sands occur in several places in India, the best known deposits being near Allahabad in the U. P. Many of the deposits require further investigation and no doubt new sources will also be found by thorough search.

Cement. Though cement seems to have been made in India in the early years of this century, portland cement of standard specifications was manufactured only in 1914. Since then a great expansion has taken place and the industry is capable not only of producing for our own needs but also meets the needs of neighbouring countries. The pre-war production of portland cement in India exceeded one million tons per annum and the capacity has increased since then. The cement manufacturing concerns have now a common marketing organisation and a controlled distribution so that cut-throat competition among them has been eliminated.

The necessary raw materials for the manufacture of cement are limestone and clay. Bauxite is used for making high alumina cements. Pure white cement is made from high grade limestone. Cement is coloured by various pigments for ornamental purposes. Suitable limestones are very widely distributed in India and there are cement factories in every province.

Paint Materials. Several mineral substances enter into the manufacture of paints, ochres, red oxide, umber, sienna, green earth, titanium dioxide, compounds of lead, zinc, chromium and arsenic, barytes, carbon black, among others.

Ochres are found in many parts of India but no

comprehensive examination of the deposits has yet been made. Red oxide is found in Jubbulpore, Cuddapah and Bellary and deposits may exist associated with the hematite ores of Singhbhum, Orissa and Central Provinces. Barytes deposits occur in the Ceded districts of Madras and in the Alwar State. Titanium dioxide is made from ilmenite of which large quantities are available along certain parts of the Travancore coast. The exported ilmenite is actually used in America and elsewhere for this purpose, though it has not yet been made use of in India. Some of the other substances mentioned above are also available and can be developed.

There are now a few paint making concerns, confined to Northern India. We do not know the total value of paints produced in India and the mineral pigments used in their manufacture. There is, however, much scope for expansion of the industry, for the annual imports of paints and colours into India amount to Rs. 60 to 70 lakhs.

Abrasives. In many industrial processes it is necessary to employ certain hard substances (abrasives) for cutting, grinding, planing and polishing. Both natural and artificial abrasives are employed. The natural abrasives include quartz, flint, garnet, and corundum. Amongst the artificial abrasives are alundum (alumina) carborundum (silicon carbide) and other carbides. We have adequate resources of natural abrasives, except flint and emery, to meet the future requirements of this country. Corundum deposits are found in Madras, Assam and Central Provinces. Garnet, quartz and quartzite are plentiful in several parts of the country.

Fertilisers. Phosphates, potash and ammonia salts are important fertiliser materials. Phosphate deposits occur in Singhbhum and Trichinopoly but they have not yet been systematically utilised for this purpose. Some 7 to 8 million tons of phosphatic

nodules containing 18 to 20 per cent. phosphoric acid, are estimated to occur in the Trichinopoly district. Animal bones can also be used in powder form or be converted into superphosphate. Potash salts are available in the salt deposits of the Punjab but not even rough estimates of the reserves are available. Nitre (potassium nitrate) is produced in some parts of the country but much of it is exported. Ammonium sulphate is produced as a byproduct of coke making in the coalfields and in the coke plants of the iron and steel companies. It is also possible to produce ammonium sulphate by the use of gypsum as the basic raw material.

Agriculture in India is still primitive and needs a great deal of improvement. Even so, the country imports Rs. 70 to 100 lakhs worth of fertiliser materials. Curiously, however, the exports of similar materials from India, mainly bone-meal and fish manure, amount to some Rs. 40 lakhs per annum which is a sad commentary on the complete lack of plan or control of the country's agricultural economy.

Sulphur. The sulphuric acid production of India has so far depended entirely on imported sulphur, which amounts annually to perhaps 25,000 tons valued at Rs. 25 lakhs. The sulphur bearing deposits in the Koh-i-Sultan region of Baluchistan, which were considered to be of little value in normal times, have had to be developed as a War measure and are meeting the needs of India to a large extent. It is not known whether they can be worked under normal conditions if transport and other facilities are provided.

A few deposits of pyrites (iron sulphide) exist in the Punjab, United Provinces and Madras, but it is doubtful if they can give a sustained supply over a long period. There is, however, a very important potential source of sulphur in mineral gypsum, of which large

deposits are found in India.

Gypsum and Salt. Gypsum (calcium sulphate, hydrated) is an important industrial mineral, used for making plaster of Paris and certain other special plasters, as a retarder in the setting of cement, and as a soil conditioner. Very large and almost inexhaustible deposits occur in association with the rock salt of the Punjab and the N. W. Frontier Province. Deposits of small size occur in the Jodhpur and Bikaner States and in the Trichinopoly district of Madras. The average annual output from these sources is of the order of 60,000 to 70,000 tons, half of which comes from the Punjab. The more extensive development of the Punjab deposits is retarded because of their great distance from the chief consuming centres.

As gypsum contains nearly 19 per cent. of sulphur, it should prove valuable as a source of sulphur in India where there are no good sources of more easily available sulphur. The mineral anhydrite (the waterless or dry form of gypsum) has been used in Germany and England for the manufacture of sulphuric acid. The question of using gypsum for this purpose (as sulphuric acid is one of the most useful industrial reagents) is already receiving the attention of technologists in India and it is hoped that an easily workable process will soon be developed.

Precious and Semi-precious Stones. India has long been famous as a source of diamonds, worked in some parts of Madras and Central India. There is now a small production from the Panna State in Central India and stones are occasionally picked up from the neighbourhood of old workings in the Madras Presidency. For about half a century South Africa has been the chief source of diamond, which is mined in a number of localities. Brazil has also been a small producer for many years past.

Sapphire is mined in Kashmir; aquamarine in Rajputana; garnet, rock crystal, agate and other forms of silica in several places. But the output is comparatively small.

In an industrialised world, even these stones are used for other than ornamental purposes. The good and nearly flawless stones are, of course, reserved for the luxury trade but lesser grades find industrial uses. Diamonds are used on the cutting edges of drills for drilling through rocks. They are the best materials for fine wire-drawing. Diamond powder is used as an abrasive where nothing else will serve. Sapphire and ruby are used in bearings in watches and precision instruments. Agate is extensively used for making laboratory mortars (for powdering materials), bearings, and so on.

Other Miscellaneous Minerals. Mention may also be made of a few other minerals of some importance such as asbestos, fluorspar, monazite and zircon. Asbestos deposits are found in Madras, Mysore, Bihar and Rajputana. The first-mentioned deposits yield a small quantity (a few tons a year) of high grade spinning quality. The others are utilised for heat insulation, asbestos cement manufacture, etc. Fluorspar is the sources of fluorine and hydrofluoric acid. It is used in steel making and for preparing fluorides which are used in the reduction of aluminium ore to metal. The only deposits known at present are in Khairagarh State (Central Provinces). Monazite and zircon are minerals found with the ilmenite sands of Travancore coast; monazite contains certain rare elements which find use in the manufacture of gas mantles, while zircon is used in making certain steel alloys and high refractories.

Building and Ornamental Stones. India possesses vast stores of a great variety of excellent and handsome stones for building purposes. They have been made

use of in all parts of the country and in all centuries. Granites, gneisses and porphyries are found in Bihar, C. P., Rajputana and Madras. Marbles of great beauty and of many colours are found in Rajputana, Baroda, C. P., and Madras. Amongst these may be mentioned the celebrated white (and clouded white) Makrana and other marbles of Jodhpur and Jaipur, the green and variegated marble of Kharwa, the green serpentine marble of Baroda, the white and coloured marbles of parts of the Central Provinces, the red and brown shell marbles of Jaisalmer, the coloured marbles of the Palnad tract of Madras, the grey shell marble of Trichinopoly. The sandstones of the Vindhyan formations in U. P. and Central India have been used extensively in the Moghul buildings of Northern India, the palaces, masjids and other buildings of Delhi, Agra, Lahore and other places. The dark and cream to buff trap rocks of Bombay are widely used in and around that city.

The slates of Kangra, Monghyr and Kurnool are used for paving, roofing, etc., while the fine grained dark flagstones (known in Madras as Cuddapah slabs) are extensively used in the south for paving floors, for door and window sills, steps, and table-tops. Many other stones find use locally and may not be known outside though they may be of good quality.

The building stone industry in India is unorganised and the quarrying and preparation are, as a rule, very wasteful. It is because of this that even our very good stones are not well known and are often unable to compete with some foreign stones in Indian markets.

The value of the annual output of building stones in India is given in official returns as a little less than one crore of rupees but the actual production must be much more, as local stones are quarried sporadically and intermittently in many places.

The Future of the Mineral Industry.

1. There are now many hundreds of quarries and mines in India but it cannot be claimed that they are all worked satisfactorily. Except in the coal industry and those managed by the larger concerns, there is a dearth of suitably trained managers of mines conversant with modern practices. A large number of lessees still look upon mining as a quick money-making proposition and not as a business to be run on approved lines with long range policies. As a result, the most easily accessible parts of deposits are worked and the mine abandoned when any difficulties are encountered. The experience of India is not unique in this respect, for every country passes through this stage in the early stages of industrialisation. But there is no reason why the country should not benefit from the experience of others and avoid the usual mistakes.

Except in the case of admittedly small deposits which can be worked open-cast and by any one without special training, preliminary prospecting will be necessary to determine the extent, richness, structure and other particulars so that a suitable plan of working can be drawn up and followed, avoiding wastage and ensuring the maximum possible extraction. Such a course will give long life to the deposit though the profits will be smaller than in reckless working during a short period. Working without any plan will generally lead to the abandonment of the leaner portion which would have been included in planned working or held in reserve for the day when it would have been possible to exploit them.

2. Several important minerals have been, and are even now, worked mainly for export, except in the case of those which are too common or too cheap to be exported. Those which figure prominently in exports

are mica, manganese ore, chromite, ilmenite, magnesite, kyanite. Sir Thomas Holland's remarks on the exports of manganese ores, quoted on a previous page, apply to every one of these minerals because in normal times the cost of these minerals in a foreign market barely pays the cost of working, inland transport, handling and port charges and ocean freight. Often, as in the case of mica, mineral brokers in London, Hamburg or New York are able to make more profits than the primary producer in India. If, on the other hand, the mineral is processed into a manufactured or semi-manufactured article before export, the country would greatly benefit by the technical experience it gains, the larger labour force it employs and the larger profits it makes in the manufacture.

The export of raw mineral always encourages the exploitation of the best portion of the deposits first, because the highest grade brings in the best price. If the mineral is worked for a local industry the tendency will be to produce a uniform grade over a long period and make the deposit last as long as possible.

3. As inland water ways have not been well developed in this country, the railways are the chief agencies of transport. Minerals are unequally distributed in the country and have often to be moved long distances to reach the consumer. The cost of transport by railway then becomes high—several times the value of the mineral. Thus, first grade or selected grade Bihar coal, which is worth about Rs. 4 per ton at the pit mouth, costs anything between Rs. 16 and Rs. 20 by the time it reaches the interior of Madras, Bombay or Sind. If a distant consumer wants coal, he naturally asks for the very best quality, because the difference in price between second grade coal and the best available is barely Rs. 2 per ton, which is a small percentage of the value of coal at the consuming centre. No wonder, therefore, that there

is not much demand for the poorer grades beyond a comparatively small radius from the well-developed coalfields. The same type of price difference operates in the case of most other minerals also, except when the intrinsic value of the mineral is high compared to the freight.

The effect of the disproportionately high freight is to shut out some of our minerals from certain internal markets. It is well known that South African (Natal) coal has, on many occasions, been able to oust Indian coal from Karachi, Bombay and other parts of Western India. That coal has also had the advantage of a bounty paid by the South African Government to exporters from that country. Latterly, South African coal was subjected to a countervailing duty imposed by the Government of India so as to enable Indian coal to be sold in Bombay and Karachi. It will be seen, therefore, that there is need to re-examine carefully the freights on internal transport and also to develop, if possible, waterways which might help to cheapen transport costs.

4. But the first essential in planning for the future is to take stock of our resources and gather precise information on them. Though much the greater part of India has been covered by geologists in a general way (except parts of Orissa, Assam and the Himalayas), detailed information on most of the mineral deposits is lacking. The only official agency, the Geological Survey of India, available for this purpose, has always been inadequately staffed and financed. A few of the larger States, especially Mysore and Hyderabad are maintaining small Geological departments of their own. For a country of the size of India, scores of geologists will be required to make an initial detailed survey within a limited period of 10 to 15 years. It is immaterial whether this staff is recruited and trained entirely by the Central Government, or by the Central Govern-

ment and the Provincial Governments working in co-operation. In any case enough funds should be provided for field and laboratory investigations. There will always be a necessity for the maintenance of fairly numerous personnel in the Geological Survey, as new aspects of mineral development and other questions relating to geology will constantly arise, and technological advancement will necessitate re-examination of data relating to the relevant industries.

5. Field examination should go hand in hand with laboratory work. Analytical data and other particulars obtained from laboratory tests must be provided on the materials obtained during the prospecting operations, in order to assess the value of the deposits, to eliminate uneconomic or worthless areas and to draw up plans for working. At the same time, further research will have to be undertaken to determine the best use to which the mineral deposits could be put and to work out new or improved processes for utilising the minerals.

It is well known that the Bureau of Mines in the United States and the Mines Branch in Canada have done excellent work to help the mineral industries of the respective countries. A study of their organisations will show us how best to tackle our problems. As the mineral problems vary in different parts of the country, it would perhaps be useful to have laboratories in different areas where they can pay particular attention to regional problems.

6. In the initial stages of establishment of new industries it may be necessary for the State to extend special facilities to them such as the grant of easy terms of lease, acquisition of land for establishment of factories, and help in the marketing of the products. The State can even start some of these industries and after running them for some time, hand them over to reliable concerns. Or it can retain some interest or control in the industries

so as to attract the public to them.

This is an age of Government aid and control of industries even in peace time. An excellent example of an industry subject to control is that of coal mining in many countries. The measures adopted by many countries to help and control their coal industries are described in a publication issued by the League of Nations about five or six years ago. Even the conservative Government of Great Britain, which cannot be accused of socialistic tendencies, found it necessary, during the depression of the last decade, to buy up the royalty rights to coal lands from the various private landowners by paying them compensation aggregating to about £65,000,000 in order to be able to control the coal industry better. The measures of control in the various countries include control of production, fixation of prices, distribution of markets, export and import quotas, subsidies, bounties, and tariff protection.

Though we lack detailed knowledge of the actual reserves of many mineral substances available in the country, there is a fairly important mineral industry now functioning. Table 1 gives the quantity and value of the chief minerals and mineral products produced in India. On a very conservative estimate, based in some cases on nominal values, the annual mineral production is valued at Rs. 36 crores. In this, pig iron is valued at Rs. 50 a ton, steel at Rs. 134 a ton, and several minerals at a nominal pit mouth value which is definitely less than real worth. Bricks, tiles and cement are not included but the last alone is probably worth Rs. 3½ to 4 crores per year. Nor have other manufactures from

TABLE I

Output and Value of Minerals and Metals produced in India in 1939

Minerals and Metals	Production	Value in Rupees
Coal	28,342,906 tons	10,64,23,835
Steel	693,064 ,,	6,96,52,932[1]
Manganese ore	967,929 ,,	3,92,94,763[2]
Pig Iron	688,320 ,,	3,44,16,000[3]
Gold	321,138 oz.	3,04,75,397
Petroleum	87,082,371 gals.	1,65,43,142
Mica	175,109 cwt.	1,13,25,346[2]
Building Materials	..	1,12,65,392[4]
Salt	1,539,663 tons	95,18,383
Copper	5,330 ,,	44,02,580
Ferro-manganese	18,385 ,,	24,63,590[5]
Ilmenite	252,220 ,,	15,46,436
Saltpetre	148,824 cwt.	11,68,446[6]
Kyanite	48,743 tons	7,46,514
Chromite	44,149 ,,	6,82,502
Clays	320,860 ,,	3,76,270
Monazite	5,221 ,,	2,33,700
Gypsum	69,823 ,,	1,71,903
Steatite	18,590 ,,	1,68,580
Magnesite	25,611 ,,	1,60,593
Fuller's earth	8,059 ,,	78,958
Diamonds	1,729 carat	68,813
Zircon	1,450 tons	40,737
Silver	22,295 oz.	29,877

[1] At Rs. 100.5 per ton.

[2] Export value.

[3] Exclusive of amount used for steel making. The total production was 1,539,889 tons. Value assumed at Rs. 50 per ton which is an underestimate.

[4] Incomplete; includes value of limestone used in cement but not the value of cement produced which must be over Rs. 3 crores.

[5] Underestimated at Rs. 134 per ton.

[6] Value of exports only. A few hundred tons must have been consumed in India.

Minerals and Metals	Production	Value in Rupees
Barytes	8,075 tons	29,312
Ochre	5,616 „	28,865
Bauxite	14,768 „	25,540
Graphite	458 „	20,690
Iron ore	..	12,690[7]
Wolfram	10 „	9,600
Asbestos	89 „	4,482
Felspar	691 „	4,335
Beryl	17 „	1,597
Garnet sand	120 „	600
Bentonite	33 „	330
Corundum	50 cwt.	250
Sapphire	4,892 carat	150
Apatite	23 tons	119

mineral substances been taken into account, such as ceramic materials, glass, fire bricks, lime, and chemicals. Taking these into consideration, we may estimate the value of the annual mineral production at least Rs. 50 crores.

The mines and quarries coming under the Mines Act employ over 400,000 persons and if we include the smaller quarries, the number of persons dependent on this type of employment may be well over 600,000. The many industries based primarily upon minerals probably employ over 2 million persons. The mineral industries not only support this large population but pay income-tax on their profits, customs duties on their imports of machinery, tools and appliances, and contribute to the State's coffers in other indirect ways. I have not collected figures to estimate the direct and indirect income to the Government as a result of the existence

[7] Used by indigenous furnaces.

of the mineral industry, but this income must be many times the amount Government spends for helping the mineral industry in its turn. At any rate, any amount spent in exploration and research is a good investment and will give a return worth many times the original expenditure.

7. The mining industry is without any organisation to help the marketing of its products. As a result, all the Indian minerals face severe competition within India and abroad and are often sold at uneconomic prices. The keen competition in the coal industry has kept the price of first grade coal in the coalfields at less than Rs. 4 per ton, the lowest price in any part of the world, except perhaps in China. In the case of mica, manganese and chrome ore, competition from other countries has to be met in foreign markets where the consumers are in a position to dictate prices to the producers. This competition has an all-round depressing effect and ultimately affects the efficiency of mining.

To prevent such harmful competition, it is necessary for the mining industry to form general or sectional marketing boards or sales organisations which will fix the prices for the different grades and find markets for all the output. If this cannot be done by the industry itself, the Government will have to take steps to enforce fair prices and prevent unhealthy competition.

8. Mineral rights in British Indian Provinces and Indian States belong to the respective Governments. Many zamindars and a few private owners are also in possession of the mineral rights. In the interests of uniformity of procedure and practice and the smooth and systematic working of minerals, it would be advisable for the Provincial and State Governments to acquire the mineral rights in all the lands falling within their jurisdiction, by paying adequate compensation for the rights so acquired.

Mineral leasing in British India is in the hands of the revenue officers (Deputy Commissioners or Collectors) of the districts subject to the approval of the Provincial Government. Only rarely do they consult geologists about mineral leases for they look upon such leases as mere revenue propositions. Minerals are classified as major and minor minerals. The major minerals are given on mining leases while the minor minerals can be removed by licence holders at certain fixed rates of fee *per cart-load*. Building stones, slates, ochres, limestones, clays, sands come under the category of minor minerals, giving much room to the licensee to work the deposits unsystematically and wastefully. In Mysore, Hyderabad, Travancore and Kashmir, mineral leasing is done by the Geological departments of the respective States. This enables the States to have a better control over the working of the deposits. In Mysore, for example, every lease except that for removal of ordinary brick-clay and sand for restricted local purposes and for road metal has to be scrutinised and granted by the Geological Department. If the Provinces also centralise mineral leasing and leave it to be administered by geologists attached to the Department of Industries or to Provincial Geological Survey (if such are constituted) it would conduce to better control of the working of the mineral deposits.

9. The lessee of mineral-bearing land pays surface rent (for occupying the land) and either a minimum dead rent based on acreage or royalty dependent upon the tonnage of the mineral raised annually. The government collects whichever of the latter two items is higher. The fixing of dead rent will have to depend on the nature of the mineral deposits, its dimensions, grade and value. A low-value mineral in thin or pockety deposits will have to be taxed a lower rate of dead rent than a high-value one occurring in moderate or large

deposits. The determination of the rate should be done by people with technical knowledge of mineral deposits. Too high a rate will frighten away prospective applicants and retard development, while too low a rate will encourage people to acquire and speculate with the properties or to work them wastefully.

Royalty is, so to say, the State's sale price of the mineral deposit which, it should be realised, is a wasting asset. It should be fixed at a rate such as would recoup the value of the asset removed, as well as give a reasonable return on the value of that asset. At present the prevalent rates of royalty are as below:

Mineral	Rate
Precious stones	30% of the net profits of each yera
Gold and silver	7½% of the net profits of each year or 2½% of the gross profits.
Coal, petroleum, natural gas, mica	5% of the pit mouth value
Iron ore	1 anna per ton of ore for a tariff valuation upto Rs. 65 per ton of imported pig iron; 1 anna per ton additional for every Rs. 15 of the tariff valuation or part thereof.
All other minerals	2½% of the pit mouth value, which may be converted into a flat rate per ton; this may be revised annually.

It is apparent from the above that the royalty rate for most minerals is low and was probably fixed many years ago in order to encourage the production of minerals. It would appear that a higher general level may now be adopted, say 5 per cent. of the pit-mouth value, as has already been done by the Government of Bihar. Even this is not necessarily the best rate in all cases. But the fixation of royalty on a logical basis is difficult and may lead to complications, for notice will have to be taken of the grade of the ore and the market price. Detailed schedules based on the relevant factors are likely to make the calculation of royalty complicated and troublesome. In some cases, however, a system of sliding

scale dependent on the market price may be adopted, to be revised from time to time. As this question involves a knowledge of the grade, value and the market conditions relating to the minerals, the advice of experienced geologists should be taken periodically, whenever a revision of the rate is considered necessary.

10. A question which has scarcely yet received any attention in this country is that of conservation of resources. This term is used in the sense that the maximum benefit should be derived by the country from the minerals. Conservation will, therefore, involve the winning of as much deposit as is possible and the utilisation of it to the best advantage. The maximum benefit of conservation can be derived only under a socialistic economy, for private capital will never work willingly without profit calculated according to its own ideas. In this connection, it must be pointed out that the amazing progress achieved by the U. S. S. R., especially in her mineral industries, within a period of fifteen to twenty years, has been possible only under Socialism. Under private capital, some of the industries may have taken decades to develop and others may not have been established at all. The paramount consideration at the present day for an undeveloped country like India is the establishment of basic industries and those necessary for the defence of the country, even if these should involve State aid in a substantial measure or management by the State itself.

TABLE 2

VALUE OF CHIEF MINERAL PRODUCTS IMPORTED ANNUALLY INTO INDIA BEFORE 1939

	VALUE IN LAKHS OF RS.
Asbestos	6
Asphalt	25
Building Materials	35
Chemicals (including sulphur)	325
China clay	13
Dyes	250
Earthenware and Porcelain	35
Fertilisers	100
Glassware	100
Mineral oils, grease and paraffin wax	1,570
Aluminium	40
Brass and bronze	95
Copper	77
Iron and Steel	630
Cutlery and hardware	275
Mill-work and machinery	1,700
Electrical instruments, etc.	300
Lead	24
Tin	85
Zinc	50
Other metals	15
Paints	67
Precious stones	112
Salt	44

N. B.—The total of these is over Rs. 58 crores which is five times the total value of exports of mineral products from India.

Even in the industries which may be considered subsidiary and non-essential, it should be the aim of the State to prevent wastage, as far as possible, whether in mining or in usage. As examples of waste in utilisation we may cite the use of coking coal for ordinary steam-raising and of high grade limestone for lime-burning! The measure of control to be exercised by

the State will naturally vary from mineral to mineral in accordance with its economic and strategic importance. The mining and utilisation of important minerals like coal, mica, chrome ore and manganese ore may well receive as much attention as common salt, of which an inexhaustible source is available in the sea around our country.

11. It will have been gathered from the previous pages that there is much scope for expansion in several mineral industries. The manufacture of abrasives, ceramic ware, glass, paints and refractories can be improved as far as the resources will allow. The steel industry can be developed greatly, so as to meet not only India's expanding requirements but also for export. Auxiliary to the steel industry will be the making of the various ferro-alloys. The establishment of manufacture of heavy machinery will follow these developments. Much of the mica now being exported can be utilised locally if a strong electrical industry is developed. There are also great possibilities in the manufacture of the light metals and their alloys.

There must be coals in the country suitable for use as raw material in the coal-tar and dye industry and in the manufacture of synthetic motor fuel. Intensive research on all the coal seams in the country will indicate suitable lines of development. In and near the coalfields it should also be possible to generate electric power cheaply from low grade coal, as it is much easier to transmit power over high tension cables for long distances than transport coal by trains. The development of hydro-electric power from all possible sources will also greatly help the advancement of mineral industries, especially if power can be supplied to large industrial plants, and particularly electro-metallurgical industries, at a rate lower than 1/10 anna per unit.

Table 2 gives the approximate annual imports in

pre-war times of articles derived from minerals. These amount nearly to Rs. 60 crores out of the total imports into India of about Rs. 160 crores of all types of materials. A scrutiny of the major items given in the Table will show that a large part of the imports of mineral products can be eliminated if the indigenous resources are properly and rapidly developed.

12. It has been pointed out that India has so far been an exporter of important minerals to other countries perhaps more freely than she would have done if she had thought of the possibilities of establishing mineral industries within her borders. The War has given a great impetus to these industries and shown the gaps which have to be filled. The full development of the country's resources is possible only if they cater primarily to our needs. There can be no objection to the export of surplus materials, whether raw or manufactured, provided steps are taken to keep reasonable reserves for future requirements. The export of surplus materials can also be so regulated and controlled as to obtain in return, from other countries, such materials as are required for India's essential needs.

It is necessary to plan the development of future mineral industries from now on so that, with the return of normal conditions at the conclusion of the War, steps can be taken immediately to put the plan into effect. Without a planned expansion, the country will continue for a long time to be an exporter of raw materials and importer of finished goods which she has been so far. Mineral raw materials will be important items of bargaining in international agreements of the future. Any agreement regarding Indian minerals should be based on this country's potential needs and only the surplus that may be available after satisfying those needs might be exported.

CHAPTER V

SMALL SCALE AND COTTAGE INDUSTRIES

By DR. V. K. R. V. RAO, PH.D. (CANTAB)
University Professor of Economics, Delhi

The importance of small scale and cottage industries in our national economy is well known to every student of Indian Economics. As a matter of fact though India figures in the list of the nine important industrial countries in the world the extent to which factory labour dominates our industrial structure is not very great. Thus, in the census year 1931 while the number of industrial workers was returned at 10454 thousands the number of persons working in factories during the same period was only 1596 thousands or in other words about 15% of the total number of industrial workers. Moreover, while factory labour is mostly found concentrated in a few industrial centres and more than 60% is to be found in the two provinces of Bombay and Bengal, labour engaged in small scale and cottage industries is more evenly distributed over all the provinces of India. This can be seen from the following table:—

(*Figures in Thousands*)

Province	Total workers	Factory workers	Non-factory workers
Bengal	1234	563	671
Bombay	931	509	422
Madras	2088	194	1894
U. P.	2478	155	2323
Bihar and Orissa	989	98	891
Punjab	1412	72	1340
C. P.	575	62	513
Assam	85	51	34
N. W. F.	105	1	104

There is, therefore, no doubt that small scale and cottage industries form an important constituent of Indian Economy.

Before we proceed to discuss the economics of small scale and cottage industries in India, it is necessary to have a clear idea of what is meant by these two expressions. It is comparatively easy to obtain an acceptable definition of cottage industries, but it is not easy to do the same thing for small scale industries. This is because, from a technical point of view, small scale industries belong to the same genus as large scale industries differing from the latter only in point of size and therefore in distribution of location. The definition of small scale industries that I propose to adopt follows the lines set out by the Bombay Economic and Industrial Survey Committee, which is the most recent authoritative body to express an opinion on the subject. Thus, by small scale industries, I mean industries where power is used and the number of workers employed does not exceed fifty and the capital invested is less than rupees thirty thousand. Small scale industries will also be taken to

include industries where no power is employed, provided the manufacture is carried on in Karkhanas and the number employed exceeds nine. Following the same Committee's Report, I shall define cottage industries as industries where no power is used and the manufacture is carried on, generally speaking, in the home of the artisan himself and occasionally in small karkhanas where not more than nine workers are employed.

It is difficult to get an accurate idea of the numbers engaged in small scale and cottage industries separately, as the necessary statistics of industrial employment are not available in this country. The only statistics available on the subject are those found in the Census Reports, the Factory Reports, and the biennial publication of the Government of India, which is entitled "Large Industrial Establishments in India." The last mentioned publication gives details of the number employed in different industrial establishments, but not of the amount of capital invested in them, while of the non-factory population no enumeration by size of establishments is to be found. This makes it particularly difficult to calculate the number of persons engaged in small scale industries. Our definition refers to the amount of capital invested and the number employed with regard to power-driven industries, while it refers only to number employed for the non-power driven industries. What we have done, therefore, is to analyse in detail the statistics given in "Large Industrial Establishments in India" with a view to getting the total number of establishments employing workers below 50 each and the number of workers employed in these establishments. The latter figure comes to 114 thousands, but it may include workers in some concerns whose capital investment is in excess of Rs. 30,000; while it takes no account of the factories which employ between 10 and 20 workers each and the non-power-driven concerns em-

ploying more than 9 workers each. If we estimate the net figure employed by these three classes at the same number, viz., 114 thousands, the total number of workers employed in small scale industries may be estimated at 228 thousands. As for cottage industries, one may proceed on the assumption that the total number of industrial workers minus those employed in large scale and small scale industries must be engaged in cottage industries. This comes to 8744 thousands. But detailed analysis of this figure shows that it includes large classes of workers who cannot be described as being engaged in any cottage industry. Thus, for example, it includes such categories as sawyers, butchers, toddy drawers, tailors, milliners, dressmakers, darners, washers, cleaners, barbers, hairdressers, wigmakers and scavengers and the total number accounted for by them comes to 2641 thousands. Deducting this figure, we get 6103 thousands as the number of workers engaged in cottage industries. It is worth while pointing out that this figure of 6141 thousands includes 667 thousand carpenters and 378 thousands blacksmiths, who are, in the main, purveyers of services rather than manufacturers of commodities. We may now sum up the result of our calculations :—

(*Figures in Thousands*)

Number of workers in large scale industries ..	1482
Number of workers in small scale industries ..	228
Number of workers in cottage industries ..	6141

Before proceeding to discuss the specific problems relating to small scale and cottage industries there is a very important question of general principle which needs to be answered. What should be the place of small scale and cottage industries in our national economy? The orthodox answer would be that their place should

be determined by the extent to which they are economic, by which is meant the extent to which they are able to sell their output at prices which can compete with those of similar goods produced by alternative methods of production. There is no doubt that considered even from this strictly orthodox point of view, there is very definite room for small scale and cottage industries in our national economy. But there are certain special considerations which must be taken into account when considering this question. These may be described as follows:—

1. The necessity for securing full employment.
2. The necessity for securing equitable regional distribution of industry.
3. The necessity for securing equitable distribution of proceeds of industry.

I shall discuss each one of these considerations in brief and relate them to the question of the place of small scale and cottage industries in our national economy.

The question of full employment is beginning to be recognised as the economic question of the age all over the world; it is an even more acute question in India where the number of the unemployed is counted in millions and where it is further complicated by the presence of seasonal unemployment on a scale which is unknown in other parts of the world. Will the establishments of large scale industries with lower costs of production solve this problem of unemployment? The answer to this question is two-fold. Firstly, it cannot solve the problem of seasonal employment. Seasonal unemployment of the type which is found in India can be resolved only by subsidiary occupations which need not require much investment of capital nor of much skill and can be taken up and left off at will; obviously these conditions cannot be satisfied by large scale mechanised industry. Secondly, the extent to which large

scale industries can solve even the problem of whole-time unemployment can be gauged by the extent of their present achievement in this direction. Large scale industries have been in existence in India now for more than half a century and have effected a considerable reduction in the volume of imports of manufacture; and yet the total number employed is only in the neighbourhood of 1.5 millions. The larger part of the manufactured goods we are still importing comes under the category of what can be called capital or production goods; and it is well known that the production of capital goods involves use of less labour than that involved in the production of consumption goods. Bearing this in mind, it is not unreasonable to suggest that the additional number of workers that can be employed as a result of the extension of large scale industries will not exceed another million or two millions; this would still leave a large number of unemployed among the people of India. From the point of view, therefore, of securing maximisation of employment, small scale and cottage industries have an important part to play in our economic life.

The second consideration, viz., that of securing an equitable regional distribution of industries, is particularly important in the case of India in view of its special geographical and political circumstances. The enormous size of the country and the lack of homogeneity in the linguistic and religious structure of its population are already beginning to affect the even tenor of our political life; and people are already beginning to talk and think in terms of provincial self-sufficiency and the necessity for limiting the *Swadeshi* spirit to the provincial field. By the very nature of their structure, the large scale industries are found concentrated in certain areas; and as they are much more important wealth-producing units than agriculture, this leads to a considerable dis-

parity of wealth-producing capacity in different parts of the country. The consequence is the growing dissatisfaction between provinces, and even within the provinces themselves, between cities and villages; and there is no doubt whatsoever that the recent movement in India associated with the name of Mahatma Gandhi for the resuscitation of village industries is largely an outcome of this latent feeling. This feeling is bound to grow, on the one hand with the growing political power of the rural masses and, on the other, with the growing strength of the different linguistic and religious groups in the country. There is, therefore, much to be said for decentralising the industrial structure of India. If this reasoning is accepted, it follows that small scale and cottage industries have a special claim for consideration in that they are the ideal instruments through which the decentralisation of industrial production can be achieved.

The third consideration, viz., that of the need for securing a more equitable distribution of the produce of industry, is also important, even in the case of a poor country like India where the pressing problem of the moment is to increase the size of the cake rather than its distribution. The growth of capitalist enterprise has led to the emergence of inequalities of income such as have never been known before and this in turn to political movements of a far-reaching and revolutionary character which rightly or wrongly depend upon violence and, therefore, the suppression, justified as temporary, of the fundamental human liberties. Is it not much better to devise a productive system which, even if not quite so efficient, will not by the very nature of its being lead to such tremendous inequalities of income? I know, of course, the answer that socialism can solve this problem without at the same time modifying the system of large scale and mechanised production, but

socialism is not so easy to achieve and if experience is a guide, it is more than likely that the very attempt for its achievement would lead to bloodshed, civil war and dictatorship. Small scale and cottage industries have this in their favour that, with proper safeguards, they will lead neither to sweating nor to inequitable distribution but will result in a larger and, more widely distributed sharing of the productive function and, therefore, to a more equitable distribution of the produce of industry.

It is clear then that the three considerations we have mentioned favour small scale and cottage industries and their importance is so great that *special treatment* becomes quite justified for the promotion and retention of this type of productive organisation in our economy. It is very important to bear this in mind when we come to suggest practical measures for tackling the difficulties of small scale and cottage industries.

Now, what are the special problems of small scale and cottage industries ? It will be convenient to tackle the problems of small scale industries first and then to go on to deal with those of cottage industries.

Small scale industries are a comparatively recent addition to our economy and are not yet very important from the point of view of numbers employed. Small scale industries can be classified under three heads :

(1) Those which are auxiliary to large scale industries. Examples would be the manufacture of healds and reads, of roller skins, of pickers, of motor cushions, etc.

(2) Those which are engaged in the supply of repair services, e.g., motor repairing, locomotive workshops and other small engineering establishments.

(3) Those which are engaged in the manufacture of finished goods. Examples would be brass,

copper and aluminium ware, gold and silver thread, furniture, cutlery, iron foundries, type foundries, hosiery, fruit canning, printing presses, soap-making, rice and flour mills. etc.

The first two types of industries do not have the problem of competing with other methods of production, while the third type has this problem in an acute form. The problem of raw materials is common to the first and third types, but does not arise in the case of the second. Allowing for these differences, we may now proceed to discuss the difficulties of small scale industries in general and suggest ways and means of dealing with the same.

The most important of these difficulties is that of finance. The amount of capital required for a small scale industrial concern is too small to merit attention at the hands of the bigger capitalists; and banks also tend to show indifference to the claims of the small scale industries because of the greater troubles attendant on dealing with them, which moreover, are not accompanied by greater profit. The joint-stock method of obtaining capital is also not open to these concerns as it is difficult to place on the market shares of such small bodies and also subsequently to find for them a ready market. All this makes it exceedingly difficult to find capital for small scale industries; but their need for finance is urgent and undeniable.[1] The only way this can be met seems to be by the creation of special industrial banks which

[1] cf. The Report of the Bombay Economic and Industrial Survey Committee: "An almost universal need of the small-scale and medium sized concerns seems to be for finance. These concerns are mostly proprietorial or limited partnerships and they do not usually have enough funds of their own to enable them

will liberally advance working capital and capital for purposes of improvement and extension of equipment to the small scale concerns. State aid in the form of loans awarded by the provincial departments of Industries is not enough. It is only a banking institution run on business principles but having the interests of small scale industries at heart which can adequately perform this function. This does not mean, however, that the creation of such a bank should be left to private enterprise. State aid and initiative is necessary but only for the creation and maintenance of the small industries Bank and not so much for the direct grant of financial facilities to small industrial concerns. The best form such state aid for the creation of a small industries Bank can take is by guarantee of the capital and minimum interest on the capital of the Bank. Government should be represented on the Directorate of the Bank but otherwise it should be run on business principles, the only stipulation being that those in charge of the Bank shall be persons who have the interests of small industries at heart.

Next to finance is the need for a commercial and technical intelligence service for the use of small scale industries. It is not possible for small scale industries to afford the employment of the technical services, the absence of which has a definitely adverse effect on their efficiency, e.g., the Indian cigarette manufacturing firms cannot afford the services of an expert blender; but there is no doubt that a substantial difference will be made to the quality of their product if they could have the services of such a blender. In fact, a number of cigarette

to improve their equipment. They also do not possess the capital necessary for storing the raw materials required by them and when they borrow from outsiders they have to pay high rates of interest."

manufacturers put this difficulty before the Bombay Economic and Industrial Survey Committee and suggested that Government should make available to them expensive technical services of this kind. Moreover, in the course of their productive activity, the small scale producers meet with a number of technical difficulties which can only be tackled by qualified industrial engineers and industrial chemists working full time and having facilities for conducting research. It is only the State which can maintain such services. In fact, as long ago as 1916, the Indian Industrial Commission had suggested the institution of a cadre of expert technical officers who will be useful in various branches of industrial activity; but this recommendation was shelved on the ground that "industries" had become a provincial subject under the dyarchic constitution; and small scale industries have been the principal sufferers as a result of this decision. It is necessary, therefore, that the proposal of the Industrial Commission should be revived and technical services useful for industry should be instituted and maintained by the Government and their service made available principally to the small scale industries. Incidentally these technical services should not merely play the passive role of tackling the problems submitted to them by small scale industries; they should also play the active role of doing research on their own, particularly in the direction of cheapening the methods of small scale production and extending the sphere of their activity to goods hitherto monopolised by the large scale industries. In this connection, the example of Japan should be prominently borne in mind where small scale industries play almost as important a part as large scale industries; and the principle of splitting up a complicated finished product into a number of simple component parts and reassembling them, which has been work-

ed with such success there, should be sought to be introduced on a large scale in India. In this, these technical services can play an important part; and it is also certain that small scale manufacturers would be coming forward in large numbers to take advantage of the information and facilities provided by these services.

Commercial intelligence is another important need of small scale industry which only the State with its widespread organisation and extensive resources can meet. Even large firms in India do not carry out market surveys and probably do not believe in market research; the small firms cannot afford to collect commercial intelligence even if they want; and yet there is no denying the fact that commercial intelligence of an adequate and timely character is the most important factor in successful marketing. The small scale industrialists are aware of this need and had represented to the Bombay Economic and Industrial Survey Committee their requirements in this connection. This Committee has recommended that the provincial Department of Industries should have a commercial intelligence branch whose services would be freely made available to the small scale industries and the Central Government should also be requested to make available to this Department the services of the Trade Commissioners whom they appoint in important overseas markets. It is reported that the Bombay Government are thinking of taking action in this direction. If other provincial Governments also followed suit and set up commercial intelligence branches in their Industries Departments they would be doing a good deal to promote the marketing of the products of small scale industry.

Another important requirement of small scale industry is protection against foreign competition and against internal competition from large scale producers many of whom represent foreign capital seeking invest-

ment in India and find corporate form in the "India Limiteds". Protection against imports can be given to small scale industries only if the State decides to have a high basic tariff; the procedure of a regular Tariff Board inquiry being obviously unsuitable in their case. In this connection it will be recalled that some time ago the Government of India appointed a special officer to inquire into the question of Japanese competition with a number of small Indian Industries; unfortunately, his work was not allowed to be completed and Government have not even published the results of his partial investigations; otherwise we would have been in possession of valuable data on this subject of foreign competition. Judging, however, from the opinions expressed by leading small scale industrialists and the resolutions passed at their conferences, there is no doubt that small industries in India are suffering from the intensity of foreign competition. It is not merely the absence of sufficiently high import duties but also the existence of certain tariff anomalies which worsen the position of these industries. Thus, e.g., some raw materials and semi-finished goods are taxed higher than the finished goods of which they form a constituent item. It is necessary that the whole tariff situation should be reviewed by the Government of India in the light of the requirements of small scale industries and with a view to promoting the establishment of more small scale industries in the country. Another serious complaint made by the small scale industrial concerns is about the competition of the "India Limiteds". These concerns have a large financial backing, up-to-date technical knowledge and other resources which enable them to undercut their competitors. It is not possible for the Provincial Governments to tackle this problem and possibly it is not even open to the Central Government to do so under the provisions of the Government of India

Act of 1935. But we have now been assured by the Secretary of State that that Act is dead and that the whole situation is open to revision. When the constitution actually comes to be revised, it is hoped that our politicians will remember the menace of foreign capital seeking shelter behind our own tariff walls, and particularly the harmful consequences of such foreign capital on the progress of our small scale industries.

The small scale industries have also complaints about the heavy incidence of railway freight charges. This again is a central question and can be looked into only by the Government of India. The Government of India have already accepted the principle of giving favourable treatment to smaller units in their collection of the excise duty on matches where a lower tax is levied on concerns whose output does not exceed 100 gross boxes a day. In the determination of the railway tariff as it is at present framed the advantage is all on the side of large units; and it is a matter for serious consideration whether some modification should not be made in this policy with a view to promote the interests of small scale industries. Finally, Government can help these industries by extending patronage to their products and by adopting a stores purchase policy that would discriminate in favour of the output of small units as against large ones. Government can also render more economic aid, therefore, hasten the establishment of more small scale industries by undertaking a vigorous programme for the development of the power resources of the country; and also by a programme of rapid road development. Then there is the problem of mutual cut-throat competition; and it is a matter for consideration whether Government should not pass legislation by which if a certain percentage of producers agree on limitation of production or fixation of price, the same would become compulsory for the remaining producers as well. It is true

that the Bombay Economic and Industrial Survey Committee has suggested that it is not advisable for the Provincial Governments to undertake such legislation, but something has got to be done to prevent the cut-throat competition that seems to be a characteristic feature of the competitive activity of small scale units. Altogether, therefore, there is a great deal that the State can do to promote the interests of small scale industries if only it makes such promotion an important part of its industrial policy.

We shall now go on to deal with the problems of the cottage industries proper. Cottage industries can be classified on various bases. But the most familiar method of classification is on the basis of raw material. Thus, one can classify cottage industries under the following heads:—

(1) Industries dealing with cotton, wool and silk, e.g., hand spinning, hand weaving, dyeing, printing, etc.

(2) Industries dealing with metals, e.g., brass, copper and aluminium ware, operations connected with blacksmithy, etc.

(3) Industries dealing with wood, e.g., furniture-making toy-making, etc.

(4) Industries dealing with leather, e.g., tanning, making of shoes, chappals, leather bags, etc.

(5) Industries dealing with earth sand, etc., e.g., pottery, lime making, bricks and tiles, etc.

(6) Industries connected with food, e.g., food-canning, rice-pounding sweetmeat-making, oil-pressing, etc.

(7) Other industries such as bangle-making, paper-making, bidi-making, goldsmithy, fish-curing, book-binding, etc.

The problems of most of these cottage industries are largely similar in character and it is possible, therefore, to treat them together. The difficulties of the cottage industries can be conveniently dealt with under the

following heads:—(1) raw materials, (2) technique of manufacture, (3) finance, (4) marketing, (5) taxation, and (6) other difficulties.

The difficulties regarding the supplies of raw materials are becoming acute in a number of cottage industries. Thus, e.g., moffussil tanners complain that good quality hides are bought up by rich middlemen on behalf of city firms and exported and similarly wool weavers complain that the best part of their local supplies of wool finds its way to cities. Obviously, it is impossible for the very small productive units that the cottage industries represent to take the necessary action individually on this matter and unless they are organised and their financial and buying resources made substantially larger by collective organisation the difficulties of getting adequate raw materials of good quality cannot be solved. In addition to the difficulty of not getting enough quantities there is a further handicap that the artisan has to pay comparatively high prices for his raw materials. Moreover, there is a considerable lack of reliability in the quality of the goods sold by the middle men, in addition to which sometimes the raw materials themselves are of poor quality and it destroys the reputation of the artisan who uses them. To sum up the position regarding raw materials the artisan does not get enough of what he wants, what he gets is of poor quality and has to be bought at a higher price. These difficulties are common practically to all the cottage industries and the only way they can be met is by collective or co-operative organisation of the cottage industries for purposes of purchase. It should also be realised that such collective organisations do not come into existence on their own and Government has a very important part to play in the initiating of such associations.

The second difficulty is that of the poor productive

technique of the cottage section of industry. The existing implements in a number of cases have descended from the hoary past and still retain the form and shape and size which they first received centuries ago. Thus, in many places the wool weaver's handloom is still of the old crude type while the oil ghani shows no change at all. The methods of manufacture are in keeping with the antiquity of the implements and their effect in promoting inefficiency can be clearly traced in tanning, pottery, etc. It is, of course, not possible for the artisan to think of improving either his implement or his technique on his own. The others who should be interested to do so, particularly the middleman, have not bothered very much while inventors and scientists have their fancies drawn towards the lure of large scale industries. The fact that there are distinct possibilities of improvment in technique once science and method are brought to bear on this question can be seen from the excellent results which have been produced by the All India Village Industries' Association and especially by the All India Spinners' Association. It must also be added that improving the artisan's technique is not enough. The improved technique has got to be popularised and the artisan induced to undertake it. Demonstrations, touring classes, scholarships, exhibitions, all these are some of the methods that can be employed and here again State help and initiative seem to be an indispensable preliminary.

The problem of finance, of course, is also a real difficulty. The artisan requires finance for purchasing raw materials, for stocking raw materials and for holding his finished articles. It is difficult for him to obtain the money that he requires from banks or even from co-operative credit societies, for his assets are practically nil and he cannot furnish sufficient security. The result is that the middleman who finances him very often

gets the artisan to sell his goods exclusively to himself and the artisan is really turned into an outworker. The problem of the financing of cottage industries is again, therefore, a problem requiring State initiative for its solution.

More fundamental than the difficulties described above is the supreme difficulty of the artisan, viz., that of marketing. Artisans in all branches of industry from handloom weavers to potters and from brick makers to basket makers complain of the difficulty of selling their output at anything like a remunerative price. There are a number of causes which account for the difficulties that the artisan experiences in selling his goods; amongst the most important of these causes must be mentioned the change that has taken place in the public taste which can be instanced by the choice of new headgear in place of the old fashioned pagotas, the growing preference of our womenfolk for polkas in place of khans, the substitution of earthenware by aluminium ware and the replacement of lime and bricks by cement and factory made tiles. There is, of course, very little that can be done to remedy the difficulties arising from this cause. But even here it should be remembered that after all fashions are man-made in more senses than one and it should be possible for the leaders of the Indian society by their practical conduct to initiate movements for giving preference to cottage products. Another cause is the lack of finish and uniform quality on the part of cottage products. This is a difficulty which can be overcome by better organisation and by the co-operative provision of finishing equipment that will give cottage products as good an appearance as that of the products of large scale industry. Another and perhaps the most important cause of the difficulties felt in marketing the output of cottage industries is that of its generally higher costs

of production as compared to that of competing machine-made articles. This has resulted in complete elimination of cottage industries in some cases and in others prices have had to undergo reduction to such levels as have meant almost a sub-human level of existence for many of the artisans. Lack of organisation is a further cause for the difficulties of the artisan. As we have already seen the artisan has no initiative and plays no original part; he is completely dependent on the middleman who is not equally interested in him, for the middleman does not mind what he sells—cottage products or the products of large scale industry—as long as he is able to maintain his business of selling. The problem of marketing cannot be successfully solved unless the artisans learn to act collectively; and for inducing him to act collectively State help is urgently required.

The artisans also complain of the burden of taxation, particularly burden imposed on them by local authorities. Their raw materials are subject to octroi duties, their finished goods are subject to octroi duties, and these are paid ultimately not from the consumer's pocket but come out of the standard of life of the artisan.

Above all cottage industry in India has been the victim of both Governmental and until very recently non-official neglect. Government has not interested itself to any extent that can be described as substantial in tackling either the technical or the financial or the marketing problems of the artisan. The public prefers appearance to durability and cheapness to everything else, while the scientists and the inventors have not bothered to turn their minds to the woes of these small people and last but not least the economists have stood aloof contemptuous of what they regard as uneconomic parts of the productive organisation. It is only recently and thanks to the efforts of Mahatma Gandhi that public

attention is being focussed on the place of cotttage industries in the national life, their difficulties and the ways and means of removing these difficulties. If the problems of these cottage industries are going to be solved it is necessary for the State to make up its mind regarding the place which these industries should occupy in the industrial structure. Reasons have already been given to show how considerations of national economy are strongly in favour of even subsidising the continued existence and extension of these industries even if private economic considerations may seem to indicate an opposite course of action. The State must, therefore, enunciate as a definite article of its industrial policy that it is in the national interest that cottage industries should play an important part in the national economy. Having done so it should tackle the problems of the cottage industries on all the different fronts and undertake action of a co-ordinated character. The principal steps which the State should undertake in this connection or what may be called the main constituents of the cottage section of the State's Industrial policy are outlined below:—

(1) *Research*—The State should set up research establishments for the purpose of investigating into the possibilities of economic manufacture of all kinds of articles by cottage methods. We know that there are already certain types of commodities where the cottage method can hold its own even in the private economic sense in which that expression is usually understood. This list should be sought to be extended and such extension can become possible only if scientists are continually at work not merely discovering cheaper ways of producing commodities in general but are engaged in discovering ways and methods by which to cheapen cottage ways of producing different commodities. The State should also subsidise private individuals and

research organisations which may be engaged in this task. The results of such research should be made freely available to the public from whom suggestions should also be invited. Thus, the first feature of the industrial policy should be improvement in the technique by which new cottage industries can be made economically possible.

(2) *Finance*—The research work mentioned above is only the first step and cannot by itself bring about the spread of cottage industries. For that purpose the State should make available new and improved implements to the artisan class on the hire purchase system. Demonstrations and exhibitions should be held and artisans induced to come forward to take up new implements and repair services should be freely made available for these artisans until there spring up a class within the community itself who can undertake this work. Financial help should also be made available for the purchase of raw materials, for the holding of stocks and also of that of finished goods. Education in the crafts should be freely made available and in this connection the importance of the Wardha scheme of education for promoting initiative and originality in the artisan class must be paid due importance. The State should also have a system of making available small loans to artisans who want to extend their business. Unless such financial facilities are provided it is difficult for the artisan to continue to survive in any self-respecting manner in the future in India.

(3) *Marketing*—We have already seen that the problem of marketing is the most fundamental of the artisan's problems. Here the State can do a great deal. First of all Government can give price preference and quality preference to cottage products for its own requirements. Government officials and leaders of society can set up new fashions by patronising cottage products

and it is fairly certain that if they do so the smaller fry who constitute such large purchasers will also follow suit. Then the State can either itself have a market intelligence department or subsidise such a department set up by organisations of artisans; such a department will keep the artisan in daily touch with the changing requirements of his customers and by giving the artisan new patterns and designs it will help him to keep abreast of fashion, in fact to change and mould the fashion himself instead of becoming the helpless victim of its changes. It is also important that in every region, the area of the region to be determined by special survey, there should be associations of artisans which should undertake bulk purchase of raw materials; distribute these raw materials to the artisans, obtain from them their finished products and sell them on a large scale basis. These associations no doubt must primarily consist of the artisans themselves. But for some time to come control must rest in the hands of the State; and district officers should be appointed who will be in charge of these associations and whose minds will be perpetually at work sensing the difficulties of artisans and trying their best to see that these difficulties are solved.

Thus, if the State tackles the problems of technique, raw materials and sales, it will have done a great deal towards the promotion of cottage industries on a healthy basis in the country. If in spite of these efforts on the part of the State it is seen that the price at which the output of cottage industries can be sold is higher than that at which the corresponding output of competing methods of production can be sold, one should not give up the cause of cottage industries. We would suggest that even in such cases considerations of national policy and public as opposed to private gain may demand the grant of some subsidy or may suggest a division of markets

between the competing methods of production. No specific suggestions can be made unless they are preceded by exhaustive and elaborate inquiries into details of each industry. But I think I have said enough to show that the cottage industry should not be dismissed simply on the ground that the cost of production of its output is higher than that of competing methods of production. I am not, of course, suggesting that the difference in cost does not matter and that the State should go on subsidising cottage industries in an indiscriminating manner and irrespective of the difference in costs. The margin of cost differences will necessarily be a most important factor in determining the extent of State patronage. If the margin in costs, given all the improvements we have suggested above, is not considerable, it may be worth while to protect, in the sense of subsidising, some of these cottage industries for a definite period of time after which an examination should be made of their position and the subsidy withdrawn if the margin of cost difference continues to be unaltered. In other words some kind of a discriminating protection—protection not in the sense of penalising competing products by levying taxes on them but protection in the sense of subsidising the products which one wants to protect and in not extending that subsidy to the competing products—is necessary. In this connection, particular attention will have to be paid to the problem of seasonal unemployment in India and the necessity for providing subsidiary occupations in order to promote a healthy and many-sided rural economic life.

I should like to conclude this brief essay by pointing out that its object is not to pose cottage and small scale industries in the light of an alternative method of production which would reign supreme and unchallenged in Indian economy. Nor is it the intention of the writer that large scale industries should be penalised

or should be taxed out of existence. On the contrary it is his firm conviction that the very extension of small scale and cottage industries depends on the extent to which the resources of the nation are maximised by the employment of large scale methods. To destroy the large scale industry in order to promote small scale and cottage industries would be like killing the goose which lays the golden eggs, or to vary the metaphor, like cutting one's nose in order to spite one's face. But it is also the writer's opinion that in the peculiar political, geographical and economic circumstances that condition the complexion of Indian life, cottage and small scale industries have an extra-special place in Indian economy and cannot be judged purely on the basis of cheapness, or what one may call considerations of private economy. If this principle is accepted, there should be no difficulty in formulating an industrial policy that will find a place for both large scale and small scale production functioning side by side in the economic life of the country. Details, of course, cannot be formulated in the absence of sufficiently comprehensive and searching inquiries into individual industries. But I do believe that the general principle should be conceded, viz., that small scale and cottage industries have an integral place in the national economy which does not depend *merely* on what are called "economic considerations", even though the extent of their influence and the sphere of their activity may be largely influenced by such considerations.

CHAPTER VI

FISCAL AND COMMERCIAL POLICY

By B. P. ADARKAR, M.A. (CANTAB)
University of Allahabad

I

A Theoretical Analysis

The main argument of the classical writers in favour of Free Trade is the theory of comparative costs based on international division of labour. International trade, according to them, is doubly blessed, for blesseth him who selleth as well as him who buyeth. The logic of the simple formula, that each country should concentrate on the production of those commodities for which it is best fitted, so readily appeals to the student of economics that he seldom stops to consider whether the advantage enjoyed by any particular country is a true, permanent and definite advantage and not one which has been the result of mere coincidence or tradition or historical accident. No industrially advanced country of Europe, barring England, however, could have developed its industries, if it were not for the systematic policy of protection pursued by most of them. In England's case, on the other hand, it was undoubtedly the result of the historical accident that the Industrial Revolution first started in that country in the field of the textile and engineering industries. Owing to the advantages of this early start enjoyed by England, she could dominate the world markets practically till the end of

the 19th century. First Germany and France and then the United States, however, revolted against the dogma of Free Trade which suited the special fiscal requirements of England but not their own. England was in the need of cheap and unfettered imports of raw materials for her new and expanding industries and of food-stuffs for her growing industrial population; moreover, she also needed free and ever-widening markets for her export of mass-produced goods. For both reasons, therefore, she favoured the freedom of international trade, and such is the influence of the relativity of economic doctrine that English economic thought also was coloured by the assumption that what was good for England must be good for other countries as well.

However, Frederick List, Carey and Hamilton revived the dry-bones of the much-maligned mercantilism and, in particular, stated the postulates of protectionism in a very realistic manner from the standpoint of their respective countries. The famous Infant Industries Argument, which may so far as List is concerned, be better styled the Infant Country Argument, was so convincing that it was incorporated by the later classical economists like Mill, Marshall and Pigou as a permissible exception to the free-trade position. For example, Pigou admits that the case for protection is "particularly strong as regards an agricultural country wishful to develop manufactures," for in such a country, the cumulative effects of industrialisation are most far-reaching than in an old-established manufacturing country. It must be noted clearly, however, that when Frederick List spoke of developing the "wealth-producing capacity" (which was far more important than wealth) of a country, he had in mind not the narrow, piecemeal conception of an infant industry argument with its implied consideration of one infant industry at a time, but the wider doctrine of an Infant Country, backward due to stagnation and

lack of opportunity but otherwise full of potentialities for the creation of both wealth and wealth-producing capacity.

It is beyond doubt true that India fulfils all the requirements of what Pigou calls a backward "agricultural country wishful to develop manufactures". It is by now a commonplace in economics how the various important elements of productive power, such as industrial technique, organised systems of transport, banking and communications, trade connections and goodwill, an efficient labour supply and a group of enterprising and far-seeing captains of industry, arise and are augmented in a cumulative manner under the aegis of a well-planned system of protection. The prosperity of Germany, the United States and several other countries has been attributed even by leading free-trade authorities like Taussig and Marshall to protectionist policies, although other causes accompanied them.

The Indian Fiscal Commission of 1921-22 went through the question of India's fiscal policy with great thoroughness and decided that, for the sake of a rapid industrialisation, the country should take a step forward in the direction of production. It was unfortunate, however, that they recommended merely Discriminating Protection of a halting nature, which would be more appropriate to a developed industrial community possessing a few infant industries than to an agricultural country with potentialities of an all-round industrial development. There is no doubt that Discriminating Protection was merely a compromise formula devised by the majority on the Commission to soothe external interests and the adjective "discriminating" merely gave a semblance of respectability and level-headedness to the triple formula devised. And yet it must be remembered that the actual details of the formula restricted its scope to a far greater extent than necessary, while the administrative machi-

nery set up for its execution by the Government came to be such that hurdles were placed in the way of applicant industries. Even a general system of protection can be "discriminating" without rushing a country into the mad pursuit of economic self-sufficiency. The triple formula, however, worked like a strait-jacket and even the Tariff Board found it necessary occasionally to relax its conflicting dictates. The formula, as enunciated by the Fiscal Commission was as follows:—

> (*i*) The industry seeking protection must be one possessing natural advantages, such as an abundant supply of raw materials, cheap power, a sufficient supply of labour and a large home market. No industry which does not possess some comparative advantages will be able to compete with the successful industries of the world on equal terms, and, therefore, the natural advantages possessed by an Indian industry should be analysed carefully in order to ensure, as far as possible, that no industry is protected which will become a permanent burden on the community.
>
> (*ii*) The industry must be one which, without the help of protection is either not likely to develop at all or is not likely to develop so rapidly as is desirable in the interests of the country.
>
> (*iii*) The industry must be one which will eventually be able to face world competition without protection.

Apart from further suggestions regarding protection of indigenous industries against "dumping" by foreign monopolists and against the competition of bounty-fed products from abroad, the Fiscal Commission laid down that only "young" industries should be protected and not "embryo" industries relying upon the speculative hopes of promoters. As regards the rate of protection

the Commission was of the view that it should be just sufficient to afford adequate protection; "what is really wanted," it said, "is a stimulant and not an opiate." Otherwise, an industry, fattened by huge profits, might become lethargic and cease to exert itself altogether. Moreover, there was also the danger of corruption and influence of vested interests, but the Commission pointed out that the danger of political corruption was not so great in India as in other countries on account of the variety of interests represented in the legislature.

The principal feature of Discriminating Protection, which has greatly influenced the development of industries by fiscal measures, is that each industry is considered separately and its claim to protection is examined without reference to the problems of industrialisation as a whole. The first clause of the formula, that the applicant industry must possess natural advantages, including raw materials, cheap power, an adequate supply of labour and a large home market, applied piecemeal to one single industry, proved to be a great stumbling-block to many applicant industries. Not even in the industrially advanced countries could all these conditions be satisfied. Practically all of them have to rely to a greater or less extent upon imported raw materials and on foreign markets, although in respect of power supply and technical skill, they have a marked advantage. It may be objected, however, that the industrially advanced countries of the West are not in need of protection and that those who need protection must justify its grant. The answer to this objection is obvious, viz., that no country in the world has been ever able to develop its industries without either an early start or a system of protection and that the fact that *today* such countries have attained superiority of productive capacity is no argument. If the rigid formula prescribed by the Fiscal Commission for the guidance of the Tariff

Board were strictly applied to the industries of the advanced countries in the early days, it is extremely doubtful if any of those countries could have attained their industrial pre-eminence. Why this iron ration, then, for a "backward agricultural country, wishful to develop industries" and possessing rich cumulative potentialities of industrialisation? Apart from protection, western countries have through their governments taken active measures, such as bounties, state aid, experimental and demonstrational undertakings, foreign trade commissions, industrial research, and active control and guidance of industrial concerns. The Discriminating Protection in India, on the other hand, has vouchsafed nothing better than a perfunctory assistance, indifferently and grudgingly rendered to industries whose subsequent development has been left to take its own course. Very often, the dilatory procedure adopted by the tariff machinery and by the Government has made the subsequent protection a veritable dead-sea fruit. Contrast, in this respect, the machinery set up in the United Kingdom, where serious steps were taken to safeguard British industries. Under the Import Duties Act and the Safeguarding of Industries Act, the Board of Trade in London is advised by the Import Duties Advisory Committee with regard to the changes necessary in the import tariff from time to time so as to check any sudden developments in foreign trade. The Board of Trade have full discretionary powers to vary the protective tariffs. The expeditious manner in which references made to the Import Duties Advisory Committee are disposed of makes it possible for an industry to secure instantaneous relief against unfair foreign competition.

Apart from these defects, the Discriminating Protection formula is marred by serious inconsistencies. Thus, the first condition requires that the industry must enjoy full natural advantages, which means that if any

industry is so completely blessed as to possess all such advantages, it is impossible to fulfil the second condition as well, because, in that case, the industry must be deemed to require no protection at all. Consequently, both the applicant industry as well as the Tariff Board (when it desires to grant protection) have to take care not to overstate the advantages enjoyed by the industry; for, that would nullify the second condition. If, on the other hand, they understate the advantages, condition No. 1 itself is not fulfilled! As regards the third condition laid down, viz., that the industry should be able eventually to face world competition without protection, it must be pointed out that it is either redundant or inconsistent. It is redundant if the first condition is satisfied; for, then, the Tariff Board's forecast becomes gratuitous; if, on the other hand, the Board stresses the second condition, stating that the industry is in such a bad way that protection is absolutely essential, its forecast, that in due course the industry could do without protection, becomes almost astrological!

II

A Brief History of the Indian Tariff (1924-39)

Prior to 1923, the fiscal policy of India was guided solely by the revenue requirements of the Government. During the War of 1914-18, the tariff not only became more diversified but its general level was raised considerably. In 1919 the Fiscal Autonomy Convention, was adopted according to which it was accepted that the Secretary of State would not interfere in fiscal matters, over which there was agreement between the Indian Government and its legislature, and that his intervention when it did take place was to be limited to safeguarding the international obligations of the Empire or to any fiscal arrangements within the Empire to which

His Majesty's Government was a party. This was followed by the appointment in March 1921 of the Fiscal Commission. As stated in the previous section, the Commission recommended a policy of *discriminating protection.* This policy was adopted and embodied in a famous resolution by the Legislative Assembly in February 1923. The resolution also recommended the creation of a Tariff Board which was constituted in July 1923. The Tariff Board examined several cases referred to it and as a result of its recommendations protection was extended to the iron and steel and allied industries, cotton and sericultural industries, bamboo paper industry, match industry, sugar industry, heavy chemical industry and gold-thread industries.

Iron and Steel

The case of the steel industry was the first to be referred to the Tariff Board who found that the industry satisfied all the three conditions laid down by the fiscal Commission, and had, moreover, a special claim on the grounds of being a basic industry. During the last war, due to the double impetus of increased demand caused by the military requirements of the Government and the shutting-off the foreign supplies, caused by lack of transport facilities, the Tata Steel Company had achieved great progress. However, after the war and especially after the crisis of 1921, the steel industry in India had to face the competition of foreign producers of steel whose capacity was inflated due to war-time expansions and who, therefore, were "dumping" their steel in every market—a trouble which was further aggravated by the formation of a steel cartel in Europe. In their 1924 Report, the Tariff Board said: "It is far from an extravagant ambition that within fifteen or twenty years, India should be able to provide the whole of her domestic requirements of most kinds of steel and should be able to

produce at as low a cost as other countries." This prophecy of the Board has now come true and in spite of growing demand for iron and steel, the country is now rapidly approaching the ideal of self-sufficiency, in respect of iron and steel. What is more, the Tatas have already announced that after 1941 they will not be requiring further protection. Apart from the enormous development of the iron and steel industry, there has also taken place a remarkable growth of subsidiary industries which have sprung up round the nucleus thus created. These subsidiary industries consist of (*i*) the tin plate industry, (*ii*) the wagon manufacturing industry, (*iii*) the cast-iron sleepers industry, (*iv*) the structural industry, (*v*) the steel wire and wire nails section, (*vi*) oxygen gas factories (*vii*) tube manufacturing industry and (*viii*) a large number of re-rolling mills and hundreds of workshops scattered all over the country depending upon materials provided by the parent industry. The parent industry itself has been spreading progressively. The Tata Company which had originally a capacity of 120,000 tons of pig iron and 80,000 tons of roll steel had in 1939 a capacity of about 1,200,000 tons of pig iron and 8,00,000 tons of roll steel. This concern is the biggest in the British Empire. The Indian Iron and Steel Company is the second biggest producer of iron. It acquired the Bengal Iron Company in 1936 and the amalgamated concern has now a combined capacity of 850,000 tons of pig iron per annum and 100,000 tons of cast-iron products. Another important concern is the Mysore Iron Works on the Banks of the Bhadravati, which produces about 28,000 tons of charcoal pig iron and 7,000 tons of cast-iron goods.

In their 1924 report the Tariff Board laid down the principle that a need for protection is measured by the difference between the prices, viz., (*a*) the price at which steel is likely to be imported into India and (*b*) the

price at which the Indian manufacturer can sell at a reasonable profit. The former was called "import prices" and the latter was called "the fair-selling price." The fair-selling price was based on the estimates of works' costs, over-head charges and the manufacturers' profit. The difference between the fair-selling price and the import price was taken as the criterion of the amount of protection needed by the industry. Accordingly, specific duties of varying amount were recommended on different kinds of roll steel ranging between Rs. 30 to Rs. 45 per ton, and also duties on wrought iron, fabricated steel, railway wagons, tin plates, wire and wire nails, and agricultural implements. The proposals were accepted by the Government. Even after 1924, however, it was discovered that the duties were not affording adequate protection against foreign dumping. The Board, however, recommended further enhancement of the duties but the Government preferred a grant of bounties in addition to the former protective duties. The maximum of total bounty fixed was first Rs. 50 lakhs but was later altered to Rs. 40 lakhs. The principal reasons given for extension of protection in 1925 were excess capacity of world steel plants, exchange dumping, and the high rupee exchange. Between 1927 and 1934 tariff changes were not of any great importance. The most significant development which took place during this period was the Ottawa Trade Agreement (Supplementary) of 1932, under which British manufacturers undertook to use Indian steel as far as possible for the manufacture of galvanised sheets, in exchange for preference on such steel to the extent of about Rs. 50 per ton. This preferential arrangement was no doubt helpful to the Tata Company, but it was objectionable on the ground that it was impossible to reconcile Imperial Preference with Protection. The last enquiry of the Tariff Board in 1933 revealed an all-round progress of the industry and it extended pro-

tection for a further period of seven years up to 1941. The war has given a great fillip to the Indian steel industry and it bids fair to progress so well that there will be probably no need for protection after 1941.

Cotton Textiles

The cotton textile industry is the largest and the oldest single industry in India. The fortunes of this industry have fluctuated from time to time. The cotton industry received a considerable stimulus from two important factors during the last seventy-five years or so, firstly, the Swadeshi movement, and secondly, the last war (1914-18). Both events led to practically effective protection being granted to the textile industry for some time. In 1923, however, the industry suffered from the after-effects of the crisis of 1921 and from the keen competition offered by foreign producers. In 1926 a special Tariff Board inquired into the conditions of the industry with special reference to Bombay and Ahmedabad. (It was pointed out that the difficulties of the industry were due to the unfair competition of Japan which was helped by the double-shift system and the employment of sweated labour. On this ground mainly the Board recommended protection. After considerable hesitation, the Government was persuaded to accept a moderate system of protection on cotton manufactures.) The Government's objection was based mainly upon the hardships which would be imposed on the handloom industry in India, but a widespread agitation led to the final recognition of the need for protection. (Under the Indian Tariff Act 1927, a duty of 5 per cent *ad valorem* or ½ anna per pound was levied on imported cotton yarn. In spite of this measure the conditions in the cotton mill industry continued to deteriorate owing to the increasing severity of competition from Japan and the worsening of the labour situation in India.) In 1929,

Mr. G. S. Hardy was appointed as a Special Officer to examine and report on foreign competition and on the extent of protection necessary. He was also asked to consider a system of specific duties on cotton piece-goods. (Mr. Hardy stated that protection against Japan and Italy was necessary) and as regards the manner of levying duties, he preferred a specific to *ad valorem* duties. In 1930 the Government levied higher duties on piecegoods for revenue considerations. There was prescribed a minimum specific duty of 3½ annas for a pound on plain grey goods and an additional duty of 5 per cent *ad valorem* on non-British goods. A measure of preference was also introduced in favour of British goods. In 1931 the duties were further raised to 20 and 25 per cent on British and non-British piecegoods respectively. The issue of protection was further complicated by the Ottawa Trade Agreement in 1932 as discussed in the next section. Under this agreement Britain agreed to encourage the purchase of Indian cotton in lieu of preferences granted in the finer qualities of piece-goods. The difficulties of the cotton textile industry after 1921 were mainly caused by competition from Japan, loss of foreign markets especially China, a high and adverse exchange ratio and, finally labour unrest. In the special case of Bombay, the difficulties were further aggravated by the establishment of new factories in centres like Cawnpore, Ahmedabad, Bangalore, Nagpur, Calcutta, etc. The protection was granted mainly as an anti-dumping measure. (Substantive protection as such has never been granted to the cotton textile industry. This is as it should be, because the cotton textile industry, can by no stretch of imagination, be regarded as an "infant industry.")

Sugar Industry

The Tariff Board considered the question of pro-

tection to the sugar industry in 1930-31. In their discussion they attached much importance to the agricultural aspect of the case. The development of the sugar industry was necessary not only for the reason that the sugar industry was in itself desirable, but also for the reason that it led to the creation of a commercial crop like sugarcane, whose production was being sedulously increased by public and private agencies in India. The Tariff Board were satisfied that the industry fulfilled the conditions of the triple formula. On a comparison of the fair selling price with the import price, the Tariff Board found that the industry would need protection to the extent of about Rs. 6-9-0 per cwt., for a period of fifteen years. The Government accepted the decision regarding protection, imposing a duty at the rate of Rs. 7-4-0 per cwt., on all classes of sugar until 1938. In the Supplementary Budget of 1931, however, a surcharge of 25 per cent was imposed on the duty which was thus brought up to Rs. 9-1-0 per cwt. In 1934 the Government took a review of the whole position and decided to impose an excise duty on factory sugar in order to support the falling revenue from sugar and introduced legislation enabling Provincial Governments to apply schemes for enforcing a minimum price for sugarcane so as to benefit the agriculturist, for whose sake primarily protection was originally granted. The years 1933-36 were years of difficulty for the sugar industry, owing to over-production of sugarcane as well as Sugar. The difficulties were not mitigated by the measures taken by the Government. The Provincial Governments of U.P. and Behar, however, passed a joint law requiring the sugar mills of the two provinces (which formed a majority of the Indian sugar mills) to join a sugar Syndicate for the orderly marketing of sugar in India. Owing to establishment of this Syndicate, the industry was partially enabled to tide over its difficulties by means

of central control of sugar distribution. However, sugar production outside the two provinces went on increasing by leaps and bounds and the stable conditions created by the Syndicate by putting restrictions on its own members, were availed of by the outside factories in the Punjab, Madras, Bombay, Bengal, Mysore and Hyderabad. Some of these outside factories have been better managed and also able to get a better quality of sugarcane than in U. P. and Behar. In addition to this increased competition, the Syndicate had to face the attacks of irresponsible speculators whose activities to this day remain uncontrolled. Owing to competition and speculation on the one hand and the fixation of sugarcane prices at high levels on the other, the Syndicate has been more or less forced to pursue a high price policy for sugar. This high price policy has reacted on consumption of sugar on the one hand and on the production of sugarcane on the other; while sugar consumption has fallen, the production of sugarcane has increased enormously. Secondly, there has come about a large stagnation in the sugar industry. Large sugar stocks have accumulated and it is doubtful whether these stocks can be absorbed by the market within the next two years without inconvenience to the producers of sugar and sugarcane. In order to penalise the high price policy of the Sugar Syndicate, recently the U.P. and Behar Governments withdrew their recognition to the Syndicate accorded under the general legislation. The result was an imminent collapse of the sugar industry. However, the two governments revised their decision before any catastrophe could take place. Now the new law provides for a more stringent control of the two Governments over the price policy and allied questions in connection with the Sugar Syndicate. It must be realised that the real causes of the stagnation in the sugar market and the high prices of sugar are not necessarily

confined to the policy of the Sugar Syndicate, which was perhaps only a willing sinner; but they seemed to lie outside the scope of the Syndicate. Firstly, the artificial reason for which protection was granted, namely, support to agriculture, has all along been a stumbling-block in the way of the natural development of the industry. In countries like Java, a large measure of attention is always concentrated upon the reduction in the costs of production of sugarcane, which is an important element in the final price of sugar. Unfortunately, in India, the whole perspective has been distorted by the idea that sugarcane has to be encouraged. Sentimentally, this might appear to be right, but ultimately the interests of the cane-growers depend upon those of the sugar industry which must be enabled to do without protection in the not very distant future. If sugarcane prices are pitched up unduly high, such a perspective is impossible. Secondly, the sugar industry has been severely handicapped by the fact that the control on the selling side is confined only to two provinces and not to the entire country while the production side is not adequately controlled at all. Thirdly, no positive attempts have ever been made by the Government or by the Syndicate or by any other agency to solve the common problems of the sugar industry in a rational manner. Generally speaking a policy of drift and *laissez-faire* has been pursued by all.

Recently some of these problems came up before the Tariff Board for review. The Board estimated the fair selling price of Indian sugar to be Rs. 6-13-10 per maund and after adding for freight, etc., Rs. 7-12-0 per maund. They took the import price of Java sugar at Rs. 2-7-0 per maund and recommended a protective duty of Rs. 5-5-0 per maund or Rs. 7-4-0 per cwt. for a period of eight years. The Government, however, expressed doubts about the correctness of the Board's

conclusions, especially regarding the fair selling price and, therefore, restricted the continuation of the protective duties to a period of two years ending 1941 only. It is too early yet to pronounce upon the failure or success of the sugar industry. It has not yet been given a full and fair chance. A period of 20 to 25 years may be necessary to do this. One important feature, however, is the enormous growth of the sugar industry in India during the last eight (upto 1939) years mainly as a result of protection, which has made India the biggest producer of raw sugar in the world.

Paper and paper pulp industry

When the Tariff Board made its enquiry into the paper and paper pulp industries' conditions, it found that the Indian mills were dependent on sabai grass as their raw material. This material being very costly, paper production based on it had little chance of eventually standing the competition of foreign paper. In bamboo pulp on the other hand, India had raw material which was much more plentiful, more widely produced, and comparatively cheaper. But a considerable amount of exploratory work was essential if the paper industry was to develop with bamboo pulp as its raw material. The Board, therefore, recommended that the Government should finance a few best equipped concerns by giving guarantees on paper issues of debentures. At the same time the Board recommended protective duties on different classes of paper. The imports of paper into India fall into six classes: newsprint, printing, writing, packing and wrapping, old newspapers and other types. The Indian mills produced mainly the first three classes of paper. However, in recommending protection by way of a uniform specific duty of one anna per pound, the Board excluded newsprint from the duties, for the reason that newsprint was made from

mechanical pulp which was much cheaper than bamboo pulp, and there was no hope of India producing that paper. The Board defined newsprint as containing not less than 65 per cent mechanical wood pulp. The Government rejected the Board's recommendations for the grant of financial assistance on the ground that in effect it would lead to assistance to one private mill only, but they accepted the other proposals and granted protection for seven years as from 1925. In 1931 the Tariff Board examined the case of the industry for further protection. The Board found that the prospects of bamboo paper industry were clearlv established. But owing to a considerable fall in the price of imported wood pulp, there was an increasing tendency on the part of the mills to use mechanical wood pulp instead of bamboo pulp. Recommending that this would be ultimately harmful to the growth of the Indian industry, the Board proposed that there should be a special duty of Rs. 45 per ton on foreign pulp, with a view to encouraging the production of bamboo pulp. There was some doubt as to the qualities of paper to be protected, but the Board suggested that the precise definition of various classes should be according to trade usage. The Government of India accepted the Board's recommendations and continued the protection till 1939, under the Bamboo Paper Industry Act of 1932. The Tariff Board proposal that the classification of paper should be according to trade usage did not remove difficulties and in 1935 the Tariff Board had again to consider a satisfactory scheme of classification of paper. As a result of the new classification proposed by the Board the range of protection enjoyed by the paper industry was considerably extended. In 1937-38, the Board was again asked to report on the continuance of protection to paper and paper pulp. The Board advised on the continuance of protection, as in their opinion withdrawal would have meant the col-

lapse of the new mills. In view of the improved conditions in the paper industry, however, the Board recommended moderate reductions in the rates on paper as well as paper pulp. Further protection for seven years from 1939 was also recommended. But the Government, while accepting the general recommendations of the Board, felt that the industry was relying to an unnatural extent on grass pulp, whose production was surreptitiously encouraged by the protection given to bamboo pulp. They, therefore, proposed a reduction of the duties both on paper as well as paper pulp, and granted protection for a period of three instead of seven years.

Match Industry

Since 1922 there had been a revenue duty of Rs. 1-8-0 per gross of match boxes which in effect amounted to more than 100 per cent *ad valorem*. Under the shelter of this revenue duty a number of match factories were established in India, some of which used Indian wood and some wood imported from abroad. When the case was referred to the Tariff Board in 1926, it was favourably reviewed by them. The Board stated that the industry possessed certain definite advantages such as cheap labour and a large domestic market. As regards the objection that certain chemical components were not available in India, the Board pointed out that no country in the world was self-sufficient in respect of raw materials of the match industry. On a comparison of the estimated fair selling price of Indian matches with the import price, the Board found that the industry could hold its own against imported matches with even a revenue duty of 15 per cent. But for technical reasons, they recommended a much higher duty, namely, Rs. 1-8-0 per gross of boxes. In 1928 the Government adopted the recommendations, converting the existing

revenue duty into an import duty at the same rate. The next occasion for the revision of duties arose in 1934, when an excise duty was imposed on matches produced in India and a countervailing import duty ranging from Re. 1 to Rs. 2 per gross of boxes.

The growth of the match industry has been such that foreign imports of matches have diminished to very small proportions. However, the most striking development in the industry has been its domination by a gigantic Swedish combine which controls about 70 per cent of the total world demand and about 60 per cent of the total production of matches in India. The establishment of a foreign concern of that size behind the tariff wall erected for the benefit of indigenous concerns is not very unusual phenomenon in the history of protectionism but while in other countries adequate steps are taken to control the incursion of foreign business, in India protection is not differentiated between foreign and Indian concerns. The Tariff Board in 1927 admitted the necessity of keeping a watch on the company to see that it did not employ its huge resources to establish a monopoly in India. Actually, however, what has happened has borne out the fears of the Tariff Board, for the Swedish firm is reported to be using its influence in a manner disastrous to the growth of indigenous concerns. There was considerable agitation in this connection in 1928 and the Government assured the Indian concerns that they would take precautions to see that the Swedish firm did not threaten to create adverse conditions for the smaller firms. However, unfortunately no action has so far been taken in this regard and the smaller Indian concerns are still struggling to help their own against the dominating concern.

Heavy Chemicals

The case of the heavy chemical industry was consi-

dered in 1929. The chemicals included in the examination were sulphuric acid, hydrochloric acid, nitric acid, magnesium sulphate, ferrous sulphate, potash alum, aluminium sulphate, sodium sulphide, zinc chloride, copper sulphate and some ordinary salts. On account of the heavy freight on acids the manufacture of sulphuric, hydrochloric and nitric acids was generally carried on with profit in India. But this natural protection was not available for the other products. The claim of the industry for protection was particularly strong owing to its being a key industry. The unit of production being very small the costs were rather high and consequently the local concerns found it difficult to combat with international combines like Imperial Chemicals Limited. But the market in the country was sufficiently large to assist production on an economic scale. The machinery required was comparatively simple and could be easily handled by Indian labour which was also cheap. In respect of raw materials though India possessed several of these, sulphur which was the most important raw material was lacking, but this could be imported from outside. The Board suggested that the industry should reorganise itself and increase the scale of production so as to reduce the costs per unit. Protection was recommended in the form of specific duties amounting to the existing revenue duties. No time limit was fixed, but another enquiry might be made after seven years. Finally, the Board suggested that railway freights might be reduced so as to facilitate the formation of a national combine which would be mutually beneficial to both the railways and the industry. In 1931 the Government proposed protection for a period of two years only, on the ground that an industry not yet in existence did not deserve either protection or bounties. Moreover, they did not accede to the proposal of the

Board that railway freight policy should be adjusted so as to facilitate re-organisation of the industry. The Government complained that the manufacturers were not quite eager to affect a combination of interests, and that there was general opposition to any scheme of state assistance for the manufacture of superphosphate. The Government, therefore, did not place any proposals before the legislature for the continuance of protection to the industry after 1933. The duty on magnesium chloride, which was levied earlier was the only duty to be retained. The treatment accorded by the Government to the heavy chemical industry is a typical example of the indifferent policy pursued by it. The argument not only for protection but for an active development of the heavy chemical industry, in the interests of national industrialisation, has been particularly strong in the case of a key industry like the chemical industry. But all such considerations have been waived on the flimsy pretext that combination is impossible, that railway freights cannot be reduced and that the industry has yet to develop fully.

The foregoing discussion on the schemes of protection granted to some of the more important Indian industries will have served to show that the policy of *discriminating protection* adopted on the recommendation of the Fiscal Commission has been pursued in a rather half-hearted manner. The triple formula has blocked the progress of industries. If any protection has been granted it has been necessitated by the peculiar conditions of the aftermath of the last war and by the dumping policies adopted by foreign competitors. There is little of scientific protection in it. The case of the glass industry which was turned down by the Government in spite of the recommendation of the Tariff Board also stands out as a negation of true discriminating protection. Finally, the system of protection has been further

whittled down by the emergence of imperial preference in recent years. We shall consider this new development in the next section.

III

Imperial Preference Within Protection

Proposals for Imperial Preference were first mooted in the days of Joseph Chamberlain who advocated an Empire policy of preference in 1903. On that issue, however, Joseph Chamberlain was defeated. In those days free trade sentiment was particularly strong in England and consequently Imperial Preference could not receive much support in England. The Government of India, under Lord Curzon also consistently turned down proposals for Imperial Preference. After 1931, however, there was a resuscitation of both protection and Imperial Preference (the latter under the garb of a new name, viz., Empire Free Trade). It is not surprising that the fiscal policy of the Home Government should once more be reflected in that of the Government of India. In 1903, it was pointed out that Imperial Preference was unnecessary for India, because "without any such system India already enjoyed a large, probably an exceptionally large, measure of the advantages of free exchange of exports and imports." The fact that three-fourths of the total imports were derived from the Empire and about the same proportion of exports were sent to the foreign countries, implied that any preferential arrangement would lead to fall of Government revenue on the one hand and of exports on the other. Another important consideration which weighed with the Government of India was the fact that India was a debtor country, requiring a favourable balance of trade, which could not be safeguarded by bilateralism. In 1932 the Fiscal Commission also stated that the condi-

tions of India's foreign trade had not altered so as to suggest a change-over to a system of preferential tariffs. It quite rightly pointed out that preference to Imperial trade could, under the circumstances, involve raising of the existing import duties on imports from other countries and that it was not proper that India should be called upon "to bear an additional burden for the furtherance of interests which are not primarily Indian." Curiously enough the Commission suggested a system of *discriminating preference* (a novelty) suggested by the parallel of *discriminating protection* governed by the principles of:

(*i*) the approval of the legislature;
(*ii*) the maintenance of the required protection for Indian industry
(*iii*) the avoidance of appreciable economic loss to India on balance.

Subject to these conditions, preference to Britain was to be a free gift from India, while in the case of other Empire countries it was to be based on a reciprocal arrangement.

In pursuance of these recommendations of the Fiscal Commission the Indian Legislature imposed lower duties on British goods than on similar foreign goods, in 1927 and 1930. In the former year differential duties were levied on British steel and in the latter on British cotton piecegoods. It was, however, announced that the decisions did not commit India in any way to a general system of Imperial Preference. Much water had flowed down the bridge in the meantime, and international trade had undergone many changes. Economic nationalism characterised the commercial policies of every nation and what with import quotas, bilateral agreements, barter arrangements and with exchange restrictions of various kinds, it became necessary for each country to

attach itself to a definite group of inter-trading countries, for fear of being isolated altogether. On top of that, as stated above, Britain also adopted Empire Free Trade along with the other Empire countries. This created a new situation for India. As put by the Indian delegation to the Imperial Economic Conference at Ottawa, "it was never a question of what India stood to gain (by joining a general scheme of Imperial Preference) but what she stood to lose," by standing outside of it. There is no doubt that the exclusion of India from a common area of Imperial Preference would have been a source of serious difficulties for her, in view of the depression, the declining international trade, increasing restrictions and shrinking markets. The Indo-British Agreement, popularly known as the Ottawa Agreement, was ratified by the Legislative Assembly in 1932 in the first instance for a period of three years. The Agreement provided for the grant of a preference of 10 per cent on a large number of commodities imported into India from Britain and a similar preference of 10 per cent in most cases on many articles imported into Britain from India, also varying amounts of specific differential duties on certain Indian commodities and the continuance of free entry of a few Indian commodities. Immediately after the ratification of the Ottawa Agreement, a powerful agitation was led by businessmen, politicians and economists against the Agreement. However, the agitation bore little fruit, for the Government was adamant. The Legislative Assembly in 1936 recommended that the Ottawa Agreement be denounced without delay and that instead of allowing bilateralism to be restricted to the Empire countries, it should be given a full scope by reciprocal trade arrangements, with various other non-Empire countries, with which India had long-standing and growing trade relations. However, the Government extended the period of the Agreement pending

further arrangements by mutual negotiations. Accordingly after protracted negotiations a new Agreement was signed between India and Britain in 1939 and later put into force in the teeth of opposition of the legislature.

Several attempts have been made by different writers to evaluate the effects of the Agreement on India's export and import trade. However, a statistical examination of such a question bristles with insuperable difficulties. In the first place, no one can say what would have been the condition of India if the Agreement were not adopted. It would be sheer speculation to hazard any estimate of gains and losses on either side. Secondly, since the Ottawa Agreement was signed, the world has witnessed so many changes in its monetary, commercial and industrial structures that precise effects of such a comparatively small event as the Ottawa Agreement are bound to get lost in a jumble of conflicting effect brought about by such major events as the departure of a large part of the world including India from the gold standard, the growing economic nationalism in the world, the recovery of international business after 1933, and the enormous fillip given to industrial demand for raw materials by the economics of war between 1935 and 1939. The modern craze is for bilateralism and it may well be the case that those who do not move with the world will be left very much behind. However, in the case of a country like India, it might have been possible to adopt a system of industrial production and commercial policy which circumvented the difficulties created by the world bilateralism. The principal fear of those who favour bilateralism in India seems to be that a reduction in exports would result in a disruption of India's balance of payments. It is no doubt true that being a debtor country India must maintain a favourable balance of trade, and it is doubtful whether bilateralism is likely to secure this. On the contrary

it is bound to create equality of export and import trade. If exports of raw materials fail, the obvious solution is to provide an alternative internal market for the raw materials by developing Indian industries. On the other hand, in view of the fact that a balance of trade depends upon imports as well as exports, a general reduction of imports, consistent with the policy of protection, could not only secure the goal of increasing industrialisation, but also facilitate a favourable balance of trade at the same time. India, with her enormous supplies of a variety of raw materials, her large and expanding home markets for various manufactures and her idle human and capital resources, would no doubt be a substantial gainer on the balance by an economic self-sufficiency, which was not of her own seeking. However, such a mobilisation of India's resources presupposes an active participation by the Government so as to encourage the development of industries.

Reference might here be made to the system of preference within protection created by the Indo-Japanese Agreement of 1934 and 1937 and by the Bombay-Lancashire Pact of 1934 (otherwise known as the Mody-Lees Pact) in respect of the cotton textile industry and by the Supplementary Ottawa Agreement in respect of Iron and Steel. The principle underlying the Indo-Japanese Agreement was the definite linking of imports of Japanese piecegoods on a sliding scale with exports of Indian raw cotton to Japan. This agreement was necessitated by the fact that nearly one-half of the Indian cotton crop has to find a market overseas, while the remaining half is absorbed by the Indian textile industry and by the handlooms. In the case of the Mody-Lees Pact, on the other hand the arrangement was based upon reduction of the duty on British piecegoods and yarn in exchange for an undertaking on the part of Britain that Indian cotton would be popularised in Lancashire.

However, the actual consumption of Indian cotton in Lancashire was by no means encouraged or popularised to the extent imagined or expected by the parties to the Pact. The principal reason for this was that British manufacturers have preferred the long-staple cotton of the United States and Egypt for the special lines of finer cloth which they produced, to the short-staple cotton which does not serve their purpose so well. Figures have been quoted to show that consumption of Indian cotton increased, but it appears that this increase was largely due to the general trade recovery which took place between 1934 and 1937. In the case of the steel industry preference within protection was granted to galvanised sheets made by British manufacturers with non-Indian pig iron as well as with Indian pig iron as against non-British galvanised sheets. This arrangement was acceptable to the Tata Company owing to the surplus of pig iron available to them, which they could not conveniently convert into galvanised sheets. However, from the point of view of the larger interests of the steel industry and of the newer concerns, the arrangement was hardly calculated to help the progress of the industry. Preference within protection may have provided a temporary solution, but the permanent problem will have to be tackled by the industry.

IV

The Incidence of Protection

The question of the consumers' burden is inherent in a policy of protection. In fact it may be called the defect of the merit of Protection. It has been the complaint of the critics of Indian protection that it has led to regressive taxation. Now, no one pretends that the system of Indian public finance leaves nothing to be desired; on the contrary a majority of Indian economists have

rightly condemned it both for its inequities of burdens and its wastefulness of expenditures. There are, however, one or two points which we have to bear in mind in this connection. In the first place, it must be remembered that inequality of distribution in this country is not so great as in the West, so that a scheme of taxes (in which, say, the custom duties are 53% of the total tax burden) is bound to be less regressive in its effects in India than in the western countries. Secondly, without prejudice to a general conclusion that reform can make the system somewhat less regressive than it actually is, it must be pointed out that as the majority of our countrymen are poor, to run any government whatever on modern lines, the tax burden will have to fall mostly upon the poor. Thirdly, a system of finance may be regressive as to taxation, but if it is progressive as to expenditure, the evil effects of regression will be sufficiently compensated for in the other direction. This is the first relativity aspect. Fourthly, regression or progression is a relative idea, if owing to customs duties, the tax system has become regressive, there are two ways in which this can be corrected : *either* to reduce customs taxation, thus relieving the poor, *or* to raise more revenue from taxes which fall specifically upon the rich. If protective duties can be justified on broader grounds, such as that the national income would increase, then clearly the former course is not the wiser, for if national income as a whole grows, the later distributional aspect can be taken care of by the Government: in brief, let the "heap" (*pace* Stamp) of national resources first be greater; its sharing can well be our next preoccupation. On the other hand, any student of Indian public finance can tell us that there is a vast scope for taxation of the upper strata of incomes, so as to make the bias of the tax system more progressive or less regressive than it is today. Reform of income-taxation,

taxation of the incomes from land, taxation of inheritance, succession and legacies, taxation of property (both movable and immovable) of joint and separate families, and of transfer of property,—these and several other sources will have to be tapped. Though the difficulties, principally, legal and administrative, are great here, our authorities on taxation have generally agreed that the country is insufficiently taxed in these directions as well as on the whole. We shall be reaching the *optimum* size of public finance in India by increasing our public activities rather than by curtailing them: if this is so, there is no case for reducing customs duties but only for exploring the other avenues of taxing the rich. Finally, and this is a theoretical point, it is not correct to suppose that regression reduces economic welfare under all circumstances whatever. It might do so, if the actual *absolute* taxation paid in by the poor individual is greater in amount than what the rich individual pays: for the rest, the theory of public finance does not make any deliverance on the question. Although it may well be granted that a greater element of progression will make the maximum number of us happier than we are, there is no proof that in India the poor actually pay in taxation more than the rich or that the rich benefit actually by expenditure more than the poor and hence the conclusion is that there still takes place a transference of wealth from the rich to the poor in this country which may be insufficient but which is certainly not negative in character.

It has also been said that protective duties make the rich richer and the poor poorer, thus aggravating the existing inequality of distribution. The argument is that the duties cause the prices of the goods protected to rise thus injuring the consumers who are mostly poor while they benefit "the favoured groups of entrepreneurs, investors and wage-earners" connected with

the industries concerned. Now it must be admitted that it is one of the incidents of industrialisation that it creates a rich entrepreneur class: this is not peculiar to protection, it is inherent in industrialisation itself. On the other hand, the "burden of the consumer" question is not such a simple issue. In the first place, it is not clear that the poorer sections of the society do actually bear a large part of the burden of protection in India: my personal view is that it falls to a greater extent on the *middle* classes who are the principal consumers of imported and protected goods. Apart from this, however, in order to assess the actual injury caused, we have to take into consideration not only the rise in prices (which may indeed be temporary, the period depending upon the measure of protection and the development of the industry), but also the addition to the incomes of the poor caused by (*i*) increased *primary* employment in the industry itself, and (*ii*) the reactions of this on *secondary* employment in several other industries and agriculture, which relieve the pressure on the soil. To the extent, (or even more than that), that prices rise as a whole, total purchasing power increases, so that the harm done to *total* consumption, which is definitely greater than before, is illusory. What is more, by employing the unemployed and thus bringing about some favourable redistribution, the sum of human happiness is actually increased. Any contrary conclusion is due to the common confusion between the term "producers" and "entrepreneurs"; in truth by producers we mean here all those, workers and others, who are engaged in industries.

Finally, some critics aver that there has been a loss of revenue to the Government in so far as protection has been effective. Of all the arguments against discriminating protection, this perhaps is the lamest and most slipshod. One need not produce statistics in this connection to disprove what is indeed a fact that during

the last few years the revenue from protective duties has fallen. It is, of course, due very largely to a general fall of imports caused by the Depression and the reduced purchasing power of the people. But the general proposition, that in so far as protection is effective revenue must fall off, must indeed be granted. But the question that arises is, why should the Government look for revenue in these shaky quarters? And even if they do, why should they not be prepared to adjust their taxation system to the changing fabrics of revenue? And is a revenue loss to be regarded as a *national loss*, in strict theory? At the most, a revenue loss might cause administrative inconvenience, necessitating the imposition of new taxation or the scaling up of the old. Theoretically, it is not even improbable that reduction of duties on some of the "adult" protected industries would be augmenting the revenue. This can be tried if necessary, but there is no ground whatever for the claim that "India's *tariff* policy must primarily be directed by revenue considerations." We must conclude, therefore, (*i*) that in so far as protection leads to establishment of new industries, it becomes possible to gather more revenue by way of income tax and excise, both of which can substantially make up for the so-called "loss," and (*ii*) that if the national dividend as a whole increases, as it must in a country in which large masses of human and material resources are lying unemployed, these superficial considerations have no bearing on the questions of fiscal policy.

CHAPTER VII

FOREIGN TRADE UPTO 1939

By DR. B. V. NARAYANSWAMY NAIDU,
M.A., B.COM., PH.D., BAR-AT-LAW
Principal, Pachaiappas College, Madras

Growth of World Trade

One of the most arresting features of the modern world is the rapid growth of trade relations between different parts of the globe. Ever since the age of scientific discoveries, industrial revolution, and transport development, the exchange of goods and services between peoples of different regions grew in complexity as well as magnitude. Inventions made mass production possible and mass production left surpluses to be exported out of the country. Modern industrialism took its origin in Europe, especially in Great Britain; and the sudden increase in the production of manufactured goods goaded the European nations to ramify all over the globe by means of trade. Gradually the food-stuffs and agricultural products of non-European tropical countries were exchanged for the product of European industry. The rise of international division of labour on the basis of this interdependence was the result. Modern international commercial intercourse is the outcome of the interaction of inventions, foreign trade, and the division of labour.

Foreign trade has been only a process of popularising the achievements of industrialisation and diffusing the advantages of international division of labour. The

commercial link between different regions rapidly diffused the knowledge of discoveries and inventions, brought new commodities into the orbit of trade and placed the industrial, agricultural and mineral wealth of one country at the disposal of another. The standard of living of the peoples of the world, especially of the nations of Europe, increased rapidly. The achievements of foreign trade till the last quarter of the 19th century can be summed up as the popularisation of man's conquest over nature, rise in the standard of man's comforts, the maintenance of huge populations, and the increasing political and cultural contact of nations who were different in origin, faith, and association. The whole world became one huge market.

For the rapid growth of international trade and the proper functioning of the division of labour, the greatest possible freedom was required. The principle of the division of labour required unrestricted markets, safe transport, and freedom for the movement of capital and labour. The industrial leadership of Great Britain necessitated the advocacy of the "free trade" principle. Her free trade principles and open door policy dominated the theory and practice of international commerce till the close of the 19th century, and held sway only so long as the wealth and welfare of the world as a whole increased without seriously influencing any particular unit.

Free Trade Discarded

The basic assumption of the theory of free trade that the advantage of free trade is mutual has been found misleading everywhere, so also in India. The economic history of the 19th century world demonstrated that while the wealth of the manufacturing countries of Europe grew very rapidly, the standard of living of the agricultural countries showed rather a slow progress; the exchange of products between the industrial and

agricultural countries has been decidedly disadvantageous to the latter. The urge for restoring proper relations between the industrial and agricultural countries began to assert itself. Rivalry amongst the manufacturing countries and the competition for markets grew forceful. Governments came to recognise the dangers of excessive dependence on foreign countries; efforts were made by the various States to safeguard the economic life of their citizens; state interference gradually influenced commerce and the consequent frustration of the free market principle resulted in the end of free trade and the adoption of national self-sufficiency ideal. As the pattern of world economy changed, and as science wiped out the differential advantages of production between different countries, the nature and purpose of foreign trade also changed. The influence of nationalism and the interference of political organisations grew powerful in controlling the nature, direction, and volume of foreign trade.

The Great War of 1914-18 released new forces which governed world economic relations. The danger of a nation being starved into defeat during times of war necessitated artificial aid to key industries irrespective of the natural advantages they possessed. The collapse of the international gold standard, the rise of tariffs, the uncertainty of foreign lending, and the creation of new states in Europe disturbed the peculiar economic equilibrium of that hemisphere, and restricted international trade. Great Britain lost her industrial hegemony and the rapid growth of industry in the East necessitated the adoption of protection to safeguard her 'home' markets, national as well as imperial. Today economic nationalism seems to be the chief cry and the governments have turned from foreign trade to internal trade for the preservation and improvement of the economic life of the people.

What part India had to play in the broad changes that came over the structure of world economy and the principles of foreign trade? What were the advantages she reaped out of her external trade all these years? These are important questions that arise when the growth of India's foreign trade is placed against the background of world forces. Certain preliminary remarks are needed for a proper assessment of the importance of foreign trade to a country's economic progress in general. A mere growth in the volume of external trade does not necessarily imply a corresponding increase in the national welfare. The value of external trade to a country can be known only with reference to the size of the country, its geographic location, the nature of its economic resources, and the stage of economic development it has reached. Dense population in an unproductive territory may necessitate great dependence on foreign trade but for vast stretches of agricultural lands external trade becomes less urgent. A large country with its varied potentialities can afford to develop her internal trade and give the external trade a definitely minor place. For advanced industrial countries foreign trade has become a very vital necessity for the maintenance of the standard of living that has been already accomplished there, while agricultural countries look up to foreign trade for the supply of machinery for their industries, for manufactured goods, for implements to increase the fertility of land. Since the advent of the British the enormous strides of India's foreign trade increased the standard of living of the Indian population and brought new land under cultivation for purposes of export. India became the supplier of raw materials to manufacturing countries, especially to the U. K., and thereby played a prominent part in the economic prosperity of foreign countries. Due to increasing foreign demand India's output of cotton, oilseeds, jute, tea, etc.,

grew rapidly. Great attention was paid to the development of commercial crops and, food grains were to some extent neglected. The first flush of Western civilisation killed Indian handicrafts and her raw materials became the pawn of international commercial diplomacy. While India's exports continued to increase the economic prosperity of other countries, her imports have been to a great extent detrimental to her national interests and aspirations. The political status of India explains why India could not rise to the full height of economic stature. Her industries and handicrafts being crippled she imported those very commodities which she previously exported. The United Kingdom had absolute control over the fiscal policy of India and the free trade principles, which India had to adopt till 1924, reduced her to the position of a huge market for foreign manufactures at the expense of her own industries. As she became a large supplier of raw materials her population pressed more and more heavily on agriculture. Her mineral and agricultural resources could have been fully developed and she could have manufactured herself most of the articles she imported, if only she was allowed to protect her home market from the foreigners. The control exercised by the U. K. over India's currency and exchange depressed the prices of agricultural products. The numerous advantages which the British businessmen in India continue to enjoy—with regard to banking, insurance, shipping and other facilities—have operated against the growth of indigenous industries. The annual payments for the services of British nationals in India, the profit on British capital invested in this country, and the interest on the borrowed money have necessitated a huge excess of merchandise exports over imports. Therefore, this excess of exports does not indicate a corresponding increase in national wealth or credit. Inability to curtail imports and to safeguard

the home market have given a special importance to our exports. Further, India has a large foreign debt to clear and this debtor position requires an annual excess of exports over imports to the extent of nearly 70 crores of rupees.

To sum up, foreign trade is important to India because of her excessive dependence on agriculture, her debtor position, her necessity to industrialise, and her burden of 'Home' charges. India's resources and markets are so great that, from a strictly economic point of view, foreign trade should have a very minor place in determining national prosperity. As a matter of fact India's internal economy has suffered a good deal and the standard of living of her masses is going down mostly because the gateway of foreign trade is controlled by an external agency. In the interest of our own prosperity we should have a free control over our foreign trade policy. Japan, U. S. A., Australia, Canada and other countries, which were considered agricultural before the war, now dominate the world as industrial powers, while India is sliding downhill to unprofitable agriculture. If she should keep pace with world forces, if she should enjoy the benefits of international trade in full at the same time averting its dangers and pitfalls, if she desires to foster her internal trade, the door that connects her markets with the outside world must be in her own possession. The lack of such a control has been the greatest single factor that has reduced her economic prosperity.

2. *India's Foreign Trade Upto* 1929

The first decade of this century witnessed a remarkable expansion of India's foreign trade. From Rs. 210 crores in the quinquennium 1899-1900 to 1903-4 the total foreign trade increased to Rs. 376 crores in the period 1904-5 to 1913-14. The per capita trade of India increased from £ 0-8-4 in 1900 to £ 0-17-7 in

1913-14; but it must here be noted that even on the eve of the last Great War the per capita share of India was the lowest when compared to the important countries of Europe, U. S. A., and Japan. The excess of exports over imports also increased from Rs. 40 crores to Rs. 80 crores over the same period. The nature of her exports and imports remained unaltered, the fiscal policy was governed by the U. K. and her trade policy was based on uncompromising free trade principles on the British model. The question of Imperial preference did not gain support and India remained a free market with a very low tariff, adopting the most-favoured-nation treatment regarding her commercial relations with outsiders. When the Government of India equipped the country with railways, telegraphs, irrigation works, harbour developments, etc., the British industries supplied the necessary capital goods. The British control over Indian administration and finances enabled the rapid importation of equipment goods chiefly from the U. K. for the requirements of industries, plantations, building and power works. The four chief features of Indian foreign trade before the 1914—18 War were :—(1) the predominance of raw materials in export and manufactured goods in imports, (2) the gradually increasing excess of merchandise exports over imports, (3) the dominant rôle of the U. K. both on the import and export sides, and (4) the adoption of free trade policy.

An important development in the growth of India's trade during the years before the war was the steady and rapid increase of trade connection with the non-Empire countries. Trade with the central European powers, U. S. A. and the rising power in the East increased in importance partly because the imports from these countries were suited to Indian requirements—because of their speciality or the price factor—and partly because they were profitable markets for India's exports. Since

India is a debtor to the U. K. the rising favourable trade balance with non-Empire countries had to be preserved to meet the financial obligations to the U. K. Thus, the importance of triangular trade for India came into prominence. The position was clear that the day of intense competition between the U. K. and foreign powers in the Indian market was very near. While Britain's interests demanded the crippling of foreign powers India's debtor position necessitated the encouragement of trade with them. This clash of interests grew in intensity after the war and the U. K. had to use her political power in order to safeguard her commercial interests. If the interference of the U. K. in Indian commerce during the post-war years is read against the background of the trend of trade from 1890 to 1914, it is clear that the motive forces that controlled the post-war developments were moulded even before the war.

The setback to India's exports and imports due to the 1914—18 Great War was very severe. The magnitude of the reduction in the actual volume of trade is seen from the following figures (calculated on the basis of prices ruling in 1913-14):

(*Figures in Crores of Rupees*)

Year	Imports	Exports	Total
1913-14	183	244	427
1914-15	137	195	332
1915-16	105	187	292
1916-17	88	202	290
1917-18	71	187	258
1918-19	63	160	223

The imports fell by 67 per cent and the exports by 34 per cent of the 1913-14 level; the total diminished by 48 per cent. Since the imports fared worse than the exports, the increase in the merchandise balance was of

great help to India's external payments. Among the exports the percentage of raw materials increased from 39·3 to 51·7 in 1919-20. Manufactured goods which claimed 76·5 per cent of total imports before the war, came down to 73·5 per cent during the war and stood at 70·4 per cent in 1919-20. India's foreign markets were restricted due to the stoppage of trade relations with the enemy countries; trade also suffered because the destruction of wealth, the devastation of vast regions, and the turn given to industrial activities towards armament production reduced Europe's capacity to purchase Indian goods; the various restrictions imposed by the Government of India artificially directed India's exports from foreign countries to the U. K. Further, the prices of imports increased more than three times the rise in the price of exports, hence India enjoyed an actual volume of imports much less than what the figures indicated. The great dislocation of the various exchanges and the uncontrolled inflation in several countries adversely affected India's external trade relations. A comparison of the figures of exports and imports of India with those of other important countries during the war reveals that India has been one of the worst sufferers. The war left behind Canada, Argentine, and Brazil as strong competitors destined to reduce India's exports. India emerged out of the war with high tariffs, increasing taxation, mounting foreign debt. She realised the necessity for industrialisation and the dangers and deficiency of her agricultural economy. Her immediate problem was to balance the budget, to restore trade relations with non-Empire countries, and to develop her own industries behind an adequate tariff wall. The position of U. K. was very much weakened in the Indian market: the rise of Japan, U. S. A., Germany, Italy as serious competitors dealt a heavy blow to British interests in India. Britain's problem after 1919 was, first, to regain her old

position in the Indian market by driving out the foreign rivals and, secondly, to reconcile her own ambitions with India's aspirations.

Economic nationalism is one of the important by-products of the war, and this new impulse has been the motive force behind the rapidly increasing tariff restrictions throughout the post-war world. The dangers of excessive dependence on foreign countries were realised and for a time the reaction against free trade resulted in an irrational protection of the home markets. The utter collapse of international currency link, i.e., the gold standard, started erratic inflation amongst the belligerents as well as the neutral countries, and made possible an uncontrolled pursuit of economic nationalism. The economic rehabilitation of Europe was made very difficult by the excessive demand of reparation payments from Germany. The fourteen new states created by the treaty added confusion to international trade relations and facilitated the increase in tariffs. The spectacular success of the Far Eastern industrialisation as well as the possibilities of the Soviet State monopoly of foreign trade intensified the move towards protective tariff. It was only after 1925 that under the leadership of Great Britain, the move for currency stabilisation began. But while almost every country succeeded in fixing an exchange parity at a depreciated level (compared to the pre-war parity) India was one of the very few countries to adopt an appreciated ratio. Though India adopted protection after the war she had to reckon with her huge public debt. In 1920, and again in 1926, the rupee ratio was fixed at high levels and enormous administrative action was effected to prop up the exchange rate. India's fiscal autonomy was nominally recognised by a convention under the Montford Reforms but it was never conceded in effect. The policy of discriminating protection adopted from 1923 was anything but satisfactory. During the post-war decade

while other countries were endeavouring their best to organise large scale industries and to expand their overseas markets, India suffered under the overvalued rupee, the laissez faire policy of the Government, a lukewarm tariff protection, and the ever-increasing inroads into her market.

The following quantum indices of imports and exports show a gradual but steady increase in the growth of India's trade from the year 1919 to 1924:

Year	*Exports*	*Impo*
1919	81	55
1920	71	78
1921	75	68
1922	88	·75
1923	98	66
1924	102	75

The recovery, gradual and slow, towards the prewar level is clear from these figures. India's favourable balance of Rs. 119 crores in 1919-20 was followed by two years of adverse balances, and it was only in 1922-23 that favourable balance appeared to the extent of Rs. 81 crores. In 1923-24 the balance came up to Rs. 134 crores. Exports of rice, wheat, linseed, groundnuts, among others, revived rapidly. If India's import trade after 1923-24 is compared with the position before 1913, we find that she was still dependent on imports for large shipments of textile goods, for machinery, iron and steel goods, petrol, sugar, chemicals and others. But the importance of manufactures in total imports was lessened and India tended to import only those items which she could not produce herself.

The factors which reduced the intensity of foreign competition in the Indian market were chiefly as follows: (1) The growth of swadeshism. (2) The low purchas-

ing power of the Indian masses and the general deterioration of the markets. (3) Indian industrialisation due to the policy of discriminating protection. (4) Changes in the method of Government purchase of stores. It was now insisted that for the purchase of stores the indigenous goods should be encouraged as far as possible. Within these limits foreign competition still operates in the Indian market. The peculiar advantages of certain important countries should here be noted. The U. K. had the earliest and greatest hold on the Indian market because of her long political connections. The enormous British investments in the Indian enterprise, the ownership of many important industries and plantations, efficient banking organisations catering to British trade have been the chief advantages of the U. K. But the costliness of her goods compared to those supplied by her rivals, the rigidity of wages in England, the low wages paid in Japan and other rival countries, as well as the rapid scientific advancement of foreign countries have been the chief weak spots in U. K.'s position in India. Further, cotton textiles occupied a predominant place in British imports into India and the growth of indigenous manufacture of textile goods and the menacing inrush of Japanese textiles permanently injured Great Britain's superiority in the Indian market. Japan's strength must be attributed mainly to cheap labour, rapid technological advancement, co-ordination of all branches of her national activities to suit her exports ready and adequate Government aid, Japan's huge purchase of India's raw materials, and above all the very low price of Japanese goods. As India became poorer, her growing population preferred cheap Japanese imports to other costly varieties. U. S. A., Germany, and Italy held sway with regard to some specialised goods. The history of post-war trade in India shows that as India became poor the cheap imports from

non-Empire countries were preferred to the costly imports from the U. K. The very low purchasing power of the Indian masses has always been an important factor working for the diversion of India's trade from Empire to foreign countries.

The main features of the direction of India's external trade can be seen from the following table :—

DISTRIBUTION OF INDIA'S FOREIGN TRADE

(*percentage of the total*)

Countries	*Average pre-War*	*Average War period*	*Average post-War*	1929-30
United Kingdom ..	40.0	41.2	39.5	30.9
British Empire ..	52.3	57.1	52.3	42.5
Foreign Countries ..	47.7	42.9	47.7	57.5
Japan	5.5	10.9	10.4	10.0
U. S. A.	5.8	9.9	10.4	10.1
Germany	8.5	0.8	4.0	7.6
France	4.6	3.2	3.0	3.8
Belgium	3.9	0.4	2.9	3.4

This table clearly brings out certain tendencies in the direction of India's trade. The continuous decline of the U. K. in Indian trade, observable since 1870, was accelerated after the war and, in spite of a short improvement during the period 1919-1923, she lost her position in the post-war decade. The rise of Japan and U. S. A. during the war has been maintained and by 1928-29 Japan got the better over U. S. A. Germany could easily come to prominence from 0.8 to 7.6 per cent. Belgium and France also showed recovery though the pre-war level was not reached. On the whole foreign countries recovered phenomenally from 42.9 to 57.5 per cent in 1929, which is nearly 10 per cent greater than the pre-war average. The figures for the Balance

of Trade with important foreign and Empire countries are also significant. India's adverse balance with the U. K. has increased to considerable proportions since the war. From Rs. 14.4 crores as the war-period average it increased to 40.9 crores in 1929. India enjoyed increasingly favourable balance with countries other than the U. K. till 1925-26, except in the case of Java and Austria. If the 1928-29 position is compared with the pre-war average the balance of trade was favourable with all countries except Australia, China, Java, and Austria. There is also a general decline in the favourable balance with non-Empire countries and a worsening of the adverse position with the U. K., Austria, and Java since 1926. This should be partly explained by the great handicap of Indian exports and the added stimulus to imports as a result of the over-valuation of the rupee. The deterioration of India's trade balance with the U. K. was due to various factors: the predominant share of U. K. in imports of manufactures, chiefly textiles, which were now declining; the fact that the chief exports of India—cotton and jute products—found markets only outside U. K.; India's necessity to develop her triangular trade in order to pay off her obligations to the U. K. The great clash of interests between the U. K., foreign countries, and India developed clearly during the post-war decade, the economic crisis of 1929 only fanned the glowing embers. The policy of Imperial Preference, the recent trade agreements, and the rise in tariffs are all in a way the results of the powerful commercial struggle that grew during the last decade.

3. *The Depression and After*

A study of the trends of India's exports and imports during the depression since 1929 is complicated by fundamental changes that came over the theory and practice

of international trade. The unprecedented fall in prices which started from November 1929 brought to the surface the inherent contradictions of national and international economies. The rude shock which the slump administered to production and trade was everywhere followed by intense nationalism. The immediate result of the decline in world trade was the erection of tariffs, import quotas, exchange restrictions, requisitions, priority systems, control of imports and exports, price fixation, government monopolies, etc. The restrictionist policy adopted by nationalist governments accentuated the fall in the quantum and value of world trade. It is well to remember that the foreign trade of India during the slump should be studied against the background of international events, the political subjugation of India to Great Britain and the consequent necessity of her having to fall in line with the economic and foreign policies of her rulers.

INDIA'S FOREIGN TRADE 1929 TO 1939

(*Crore of Rupees*)

Year	*Imports*	*Exports*	*Total Merchandise Trade*
1929-30	241	311	552
1930-31	165	220	385
1931-32	126	156	282
1932-33	132	132	264
1933-34	115	147	262
1934-35	132	152	284
1935-36	134	161	295
1936-37	125	196	321
1937-38	173	118	354
1938-39	152	163	315

(These figures of India's (including Burma) foreign trade in merchandise exclude both the re-exports of foreign merchandise and the imports and exports on government account.)

The enormous shrinkage of trade in exports and imports is clear, the year 1932-33 being the worst year. The fall in exports is greater than the dwindling of imports. This is due to the great changes that have come over the foreign markets and the disproportionate fall in the agricultural prices everywhere in comparison to the prices of manufactured goods. The all-round fall in prices, the disproportionate fall in the price level of agricultural products, accompanied by the disparity in the price levels of exports and imports greatly reduced India's purchasing power. Since 1933-34 both the quantum and price level of imports and exports, however, gradually became more normal. This is partly due to improvement in agricultural prices.

The percentage share of the U. K. in India's trade decreased from 42.8 per cent in 1929-30 to 37.2 per cent in 1930-31 and to 35.5 per cent in 1931-32. But after the Ottawa Agreement was concluded (1932), U. K.'s share increased to 41.7 per cent in 1933-34; but after 1934-35 her share again declined and came down to 38.4 per cent in 1936-37. After the adoption of Imperial Preference India's exports turned more and more towards the U. K. and the percentage share of foreign countries in our market, both in the imports and exports declined. The case of Japan is exceptional. Her penetration of the Indian market during the depression years is remarkable, and specially since the conclusion of the Indo-Japanese Treaty of 1934 our trade with Japan has increased continuously.

A few important world forces that acted on India's economy during the depression should be remembered for a clear understanding of the fortunes of India's trade. As far as India is concerned, the unhealthy fall in prices and the growth of nationalism checked the exports of her staples, rice, jute, cotton, tea, oilseeds, and shellac among others. The control of output in indus-

trial countries, the rationalisation schemes, the prevalence of wide disparity between the wholesale and retail prices in the European markets depressed the chances of agricultural products, and, therefore, India's exports. The tightness in the money markets created after the collapse of American credit in Oct. 1929 aggravated the situation. The slump reduced the purchasing power of the agricultural communities of the world who form nearly 3/4 of the world population and thereby reduced the demand for manufactured goods.

When such a vicious circle was at work the political turmoil in India during the years 1930 to 1933 added fuel to fire in reducing her foreign trade. The boycott movement of 1930-31 proved very harmful to trade. In fact the boycott was to some extent responsible for the increasing interference of Lancashire interests in India's trade agreements and also for the rigid commercial safeguards in the Government of India Act of 1935.

A great opportunity was offered to the Indian Government, to adapt its currency policy to suit the needs of foreign trade when the U. K. abandoned the gold standard in Sept. 1931. Public opinion in India has been insistently protesting against the exchange ratio of 1 sh. 6d. which was demonstrated to be, even before 1929, one of the powerful forces in depressing Indian prices and exports. It was also complained that the Government has been following a policy of deflation to the detriment of Indian industries and exports. The currency policy was not formed to suit the pressing needs of trade recovery in India. But since the rupee was linked to the sterling the abandonment of gold by the U. K. gave a temporary fillip to our exports; but it also led to an enormous exodus of gold. The export of gold masked the real dangers in India's trade position and helped the payment of foreign obligations which would have been

otherwise impossible. During the years 1932-33 the abandonment of gold standard and the subsequent depreciation of the Japanese exchange told heavily on Indian trade. Currency manipulations during a period of international monetary debacle enabled the Japanese to push their goods in the Indian markets at low prices. The clamour of Indian industrialists and commercial bodies against the Japanese imports took a strong shape only after 1932. The Ottawa Agreement introduced a fundamental change in the foreign trade policy of India and directed Indian trade from non-Empire to Empire countries. But the full force of Japanese dumping into our market has still been felt by our industries, big and small. The Government of India had to pass the Anti-Dumping legislation and serve notice on the Japanese Government to terminate the Indo-Japanese Trade convention of 1905, thereby refusing to give her the advantages of the most-favoured-nation treatment. Japan retorted by boycotting Indian raw cotton. The strained feelings between India and Japan came to a close with the Indo-Japanese treaty of 1934. British and Indian textile interests came to an understanding after the Indo-British Textile Agreement in 1934. These two agreements, together with the Ottawa Pact, have governed India's trade policy since 1934. These agreements represent a recognition of the policy of allowing foreign countries to send manufactured goods to India in return for the raw materials purchased. The Indo-British Trade Agreement of January 9, 1935, concluded largely as a result of the pressure of Lancashire on Great Britain, defined the principles which should govern Indian trade relations with U. K.; it introduced further limitations on India's fiscal freedom at a time when her foreign trade was on the lowest ebb.

The tariff policy of the Government of India since 1929 has not been conducive to the lifting of the slump.

By the Ottawa Pact about 167 items of import were committed to preferential duties and the effect of this preference on the exports to and imports from foreign countries has been very depressing. The policy of discriminating protection benefited three industries in particular, viz., cotton, iron and steel, and sugar. But the adoption of preferential duties over a very wide range of imports from the Empire countries together with the absence of effective duties against the inrush of Japanese goods dealt a heavy blow to many Indian industries.

4. *Lessons of India's Trade Agreements*

A perusal of the recent trade agreements of India brings to light the handicaps that fetter our foreign trade. We will study some of them below. (1) The absence of *quid pro quo* is an acutely deplorable feature of the trade pacts. It is to be remembered that the Ottawa Pact gave preferences to some items in India's exports, which did not require any urgent special treatment in foreign markets, while 167 items of British imports into India enjoyed preferential duties. The Mody-Lees Pact and the Indo-British trade agreement of 1935 gave pious promises and well-wishes to India in return for the surrender of essential principles of protection and tariff administration. The Indo-Japanese agreement governed only cotton and did not avert the Japanese menace to our industrialisation. It did not at all compensate us for all the sacrifices India had to bear during the years of vigorous Japanese dumping from Jan. 1932 to Jan. 1934. Even the Indo-Burmese agreement did not give us enough concession; India could have gained much more by her bargaining strength. The absence of true reciprocity in our trade agreements has been our largest misfortune. (2) The capacity to retaliate at the right time in the proper manner was not enjoyed by the nego-

tiators on behalf of India. Both the Ottawa Agreement and the Indo-Japanese pact were the results of threats—threat of higher tariffs to our exports to U. K. in the case of the former and the boycott of our raw cotton in the case of the latter. Had India possessed the full powers to utilise her tariffs for retaliatory purposes the commercial relations with those two powers could have resulted in a greater net advantage. When the U. K. abolished the duty on pig-iron imports and when she adopted the drawback system with regard to linseed, the spirit of the Ottawa Pact was violated, but yet India could not retaliate. Further, anti-Indian laws are common throughout the British Empire and the prospects of adequate remedy seem to be still remote. While on the one hand India cannot retaliate against the U. K. because of political subjection, her capacity to hit non-Empire countries has been reduced by her commercial commitments to U. K. Post-war trade pacts demonstrate that complete control over tariffs could strengthen the bargaining power during the trade negotiations. India has been powerless to shape her tariff policy and to function to her own advantage. This situation was exploited by the European powers as well as by Japan. (3) That the trade pacts were concluded behind the back of the Tariff Board has been another handicap which throws some light as to the future prospects of Indian industrialisation. When a Tariff Board was functioning the Ottawa Negotiations were carried on in earnest and the acceptance of the Ottawa Pact showed clearly that the Government of India was pleased to demand advice from the Tariff Board when they had already made arrangements to solve the problem themselves. Again, the terms of the Mody-Lees Pact have been accepted by the Government without regard to the recommendation of the Tariff Board. The Agreement of Jan. 1935 was put into force before the 1934

Tariff Board could finally report and recommend. The 1939 Indo-British Trade agreement gives enormous concessions to the British Textiles without any regard to the advice of the previous Tariff Board. Trade Agreements have, therefore, reduced the utility of the Tariff Board in practice even as they restricted the scope of its enquiry by committing India to numerous self-imposed restrictions on the fiscal policy. (4) The growing interference of the vested interests of the U. K. in India's fiscal policy has become very clear during the depression. The triumph of Lancashire can be inferred from the exclusion of India's raw cotton from the Ottawa preferences: only verbal promises were accorded regarding the use of raw cotton while specific advantages were extended to the exports of U. K. It is also clear that the numerous safeguards incorporated in the New Constitution were already suggested by the terms of the previous trade pacts. Further, Lancashire has recorded her strong protest against Indian cotton goods entering into Burma free of duty while the U. K. goods are to pay 25% *ad valorem* duty according to the Indo-Burma tariff Agreement. A perusal of the Tariff Board reports as well as a study of the response of the Government to the advice of the Board clearly show the force and effectiveness of the intervention of U. K's industrialists. (5) The trade agreements of India do not indicate the existence of a definite objective for national development. Further, the Imperial Preference gave an artificial stimulus to our imports from the U. K. and dwindled the volume of India's commercial transactions with foreign countries. Indian exports have fallen in value and volume to a greater extent than the fall in imports. The balance of trade position is highly unsatisfactory. The Government was put to the necessity of encouraging gold exports to fill up the gap in the balance of payments. But for the exports of gold and the artificial support given to

the 1*sh*. 6*d*. ratio, the imports would have been drastically curtailed. The maintenance of imports not justified by the volume of exports and the policy of encouraging gold exports to pull up a tottering exchange are not conducive to the growth of a much-needed policy of economic development.

Lack of definite objective has led to the absence of a consistent and co-ordinated national policy. Too much of preference given to the U. K. has reduced the most-favoured-nation policy to a farce while U. K's control over the administration of discriminating protection placed Indian industries very much at the whim and fancy of British commerce. Further, the period 1932-34 was one of drift with regard to Indo-Japanese trade relations. India was made to inflict suffering on non-Empire countries by the abrogation of the M. F. N. clause which was accorded to Japan under the 1905 convention. Briefly, India's foreign trade has been regulated during the depression period by preferences which almost nullified protection to Indian industry, bilateral pacts without the principle of reciprocity, and the most-favoured-nation principle, abandoned in haste and again adopted out of threats. At one time the Government is pleased to accept the proposals of a section of Indian industrialists (e.g., Mody-Lees Pact), at some other time they ignore the unanimous verdict of the nation. Looked at from the point of view of principles accepted or the procedure adopted the Trade Agreements show a remarkable absence of predetermined plan or a preconceived policy.

Lack of fiscal autonomy, therefore, has been the root cause of the defects in the terms as well as the management of the negotiations which preceded these trade pacts. While the absence of fiscal freedom shaped these pacts they in turn reduced India's power to control the tariff or to regulate exports and imports. Inconsis-

tency in trade policy, inadequacy in the protection of national interests, the lack of *quid pro quo* in the agreements, irresponsiveness to public opinion and the verdict of the legislature, the absence of a planned objective are all the results of the loss of India's fiscal freedom. So long as India is denied the power to control her own economic affairs, internal as well as external, trade planning is least likely to be regulated along the desired lines.

5. *Bilateral Trade Pacts for India*

There is a widespread belief in this country that a policy of bilateral trade agreements would afford the necessary stability and encouragement to India's foreign trade. It has been pointed out that in the sphere of international trade there is a definite trend towards bilateralism; the time-honoured triangular trade and the M. F. N. treatment have been discarded in favour of reciprocal trade pacts. The cases of U. K., Germany, France, U. S. A., Japan and other countries have been cited as examples of successful organisation of foreign trade by means of reciprocal pacts. India is advised to follow suit as early as possible. During the depression, and especially after 1932, Indian trade has proceeded on the bilateral lines with regard to U. K. and Japan. An extension of separate bilateral treaties with all foreign countries is urged. We are reminded that in spite of a variety of restrictions there is still scope for the expansion of India's trade with Germany, Italy, France, U. S. A., Turkey, and others. We are told that India has been experiencing a declining balance of trade, and a full-fledged policy of bilateral pacts would at least stop that deterioration even if the pre-1929 level of favourable balance is not restored. Attention is drawn to the difficulty of Indian students in securing practical training in the factories, workshops and research institutes of

advanced industrial countries, it is claimed that bilateral pacts would enable us to secure such facilities.

No doubt bilateralism has benefited many countries. Great Britain could draw many countries into closer contact by the adoption of this policy. But we should study those pacts and see if the peculiar conditions of India allow the Government to have recourse to this novel departure in trade policy.

Bilateral pacts formed only one aspect of the comprehensive plans adopted by some countries to avert the crisis and to restore commercial activities. In the case of U. K. bilateral pacts with the non-Empire countries were the last attempts at trade planning. Great Britain first took care to safeguard her producers under the Import Duties Act, then she safeguarded the Empire markets at Ottawa and only then she proceeded to bargain with foreigners. The Scandinavian countries with whom the U. K. had reciprocal pacts in 1933 were all low-tariff, agricultural, raw material exporting countries very much dependent on the British market for the much-needed outlet. With regard to Argentine it is to be remembered that U. K. took 99% of the Argentine beef and had an unfavourable balance with her. In the case of Germany her external obligations were very huge and she had the power to take her exports as a *quid pro-quo* for the repayment of debt. The interference of the German Government and their policy of bilateral pacts were due to a great financial stringency peculiar to the post-war Germany.

When we propose all-round reciprocal pacts for India we must put ourselves the question whether India has the fiscal freedom to do so or the bargaining strength to negotiate to our advantage. Complete fiscal freedom, an excessive dependence on particular foreign markets, a preliminary safeguarding of national industries, unfavourable balance of trade position with the country

in question, and the power to regulate the exchange rates are the necessary prerequisites of a successful bilateral trade policy. Can India boast of possessing these necessary instruments ? Moreover, India's experience of bilateral pacts so far has been sad. The Ottawa Pact has been devoid of any element of reciprocity, it has not increased the scope of free trade as was anticipated in 1932; it has only resulted in the restriction of international trade. The pact did not work to India's advantage and it has been allowed to operate in spite of the Legislative Assembly's verdict to give it up. The new Indo-British Trade Agreement of 1939 has come into force against nationalist opinion. The Pact with Japan is the result of boycotts and threats and certainly not comprehensive enough to protect Indian industries. The working of the two pacts call for an urgent reconsideration of our trade policy.

No doubt, there is today a necessity to encourage our exports and safeguard and expand our foreign markets. The suffering of the agriculturists calls for a policy which would raise agricultural prices, and give a fillip to exports. But the nature of India's exports is such that in any scheme of reconstruction it is shortsighted to incur very great sacrifices for the mere purpose of extending export operations. Indian food-stuffs and raw materials are needed by foreign countries and with the revival of industrial activity in the world the prospects of India's raw material exports are bound to improve in all markets. U. K., Japan, Germany and other manufacturing countries which favour bilateralism have to depend on foreign markets to a greater extent than India. The proportion of India's foreign trade to her internal trade is so low that the primary attention has to be paid to the internal market and the expansion of productive activities. Our dependence on foreign trade is limited to securing the necessary export surplus to pay off our external debt,

and to import the necessary machinery for our growing industries. Unless we compromise our industrial progress, we have very little to offer the foreigners in return for the concessions obtained for our agricultural exports. Further, India usually enjoys a favourable balance with foreign countries and bilateral pacts, aiming at equalising the financial obligations arising out of trade, would only reduce the favourable balance.

The lesson is clear that India's attempt at discrimination in favour of U. K. has resulted in the dwindling of our trade balance and has caused a tariff war with Japan. No foreign country would have been easily provoked to reprisals against India if she had followed a strict free trade policy over and above the necessary level of tariffs required for home purposes. Besides, so long as international currency situation is in a chaos and exchange rates are manipulated, even bilateral pacts would not stabilise India's external trade.

The proper way to preserve the foreign markets and to restore the old level of favourable balance with non-Empire countries would be to abolish or reduce the scope of preferences to U. K. and the Empire countries, to stabilise the external value of the Rupee at a more suitable level, to appoint efficient Trade Commissioners at important international centres to organise marketing facilities, and to adopt a plan to increase the internal demand for the food-stuffs and raw materials till now exported from India. To recommend bilateral pacts under the present circumstances is to forget the real problem of India's foreign trade. U. K. is the only country of importance with whom we can have a profitable bilateral pact. But past experience shows that political subjection makes it impossible for India to utilise her bargaining strength to her own benefit. Bilateral trade pacts, in our opinion, will not play any useful part in India's Trade Policy.

CHAPTER VIII

FOREIGN TRADE 1939 TO 1943

By P. C. Jain, M.A., M.SC. (Econ.), London
University of Allahabad

I

The world war, which started in September 1939, has greatly changed the character, direction, and requirements of India's foreign trade. In the pre-1939 period it was necessary for us to have a considerable favourable balance of trade in order to pay "Home" charges—payments of interest on debt, annuities on account of railways and irrigation works, payment in connection with civil departments, army and marine charges, India Office expenses, payments for store purchase for India and furlough allowances—which amounted to an average of £ 30½ millions in the four years before the commencement of hostilities. Now, due to an almost complete repatriation of our sterling public debt which amounted to £ 356 millions at the end of March 1937 and our having built huge sterling funds in Great Britain which may very well exceed £ 1,000 millions by the time the war ends, we shall not have to provide annually for such huge payments in sterling. This will have at least two important implications for our foreign trade. If the people in power have the desire to do so, we shall now be able to determine our foreign exchange rate on purely scientific grounds. In the pre-1939 period the Government of India resisted the demand for reduction of the

foreign exchange value of the rupee from 1sh. 6d. to 1sh. 4d. on the ground that such a step would involve greater taxation in India, because with a lower exchange rate more rupees will have to be found to pay the "Home" charges. This argument cannot be used in the future. We shall now be free, if political considerations are kept aside, to adjust the foreign exchange value of the rupee to changing conditions. Moreover, we need not necessarily cater for a favourable balance of trade with countries in the sterling group. We shall feel free to develop our export trade with countries outside the British Empire or alternatively we might cater for our home market to a much larger extent than in the past. We are not suggesting a policy of economic self-sufficiency for India because in the post-war period, as in the past, this policy will be suicidal, but no harm will be done if the Indian industrialists capture as much of the Indian market as they possibly can. During the war period the imports of many foreign commodities have been reduced or eliminated and the Indian producers have stepped in to fill the gaps, at least partially. The advantage thus secured may be retained in the future provided the Indian producers adopt certain well known devices. During the past four years the consumers have become familiar with Indian made goods to a much larger extent, the quality of goods has also improved, and in some cases economies of large scale production have been secured. If the Indian industrialists are successful in their efforts we may be able to convert a larger proportion of our raw materials into manufactured goods in our own country and sell them locally. This has actually happened during the war years, as we shall presently see, and there is no reason why with some care we should not be able to continue it in the future. We shall export some raw materials and some manu-

factured goods and obtain in exchange goods which we cannot produce for ourselves and raw materials which are in short supply in our own country, but the total annual merchandise trade may as well be smaller than in the pre-1939 period.

II

During the war years our foreign trade has been determined by many extraneous circumstances.[1] In the first place, the shortage of transport facilities has reduced the volume of our exports as well as imports. In the early period of the war, ships had to go round the Cape of Good Hope and this longer journey increased the cost. Moreover, a large number of vassels were commandeered for war work and, therefore, the shipping space available for private trade was greatly reduced. As the war progressed, more ships were built and with the fall of Italy in 1943 the Mediterranean was also restored to allied traffic but even then the shortage of transport continued. Secondly, the Government of India, like governments in other countries, was compelled to impose restrictions both on exports and imports. The object of the control was to prevent essential materials from falling into enemy hands and to conserve the available foreign exchange for purchasing urgently needed goods in foreign countries. This naturally restricted both the import and export trade on private account. Finally, some of our former suppliers turned enemy or were occupied by the enemy and imports from them were thus eliminated. Even the friendly countries had to change over to the production of goods for war

[1] *cf.* Author's contribution to the Jubilee Number of the "*Searchlight*" (Patna), 1943. pp. 55-6. The Author is indebted to the Editor of "*Searchlight*" for permission to use that contribution for this Chapter.

purposes and conserved the available supplies for their own use. This naturally restricted the imports of many essential commodities. In our own country the supply available for civilian consumption was reduced and in many cases we had no surplus to export. Trade was, therefore, greatly restricted.

TABLE I[1]

INDIA'S FOREIGN TRADE, 1939 TO 1944

(In Crores of Rupees)

Year	Imports	Exports	Total Merchandise Trade
1938-39	152	163	315
1939-40	165	204	369
1940-41	157	187	344
1941-42	173	238	411
1942-43	110	188	298
1943-44	119	199	318

TABLE II

EXPORTS (INCLUDING RE-EXPORTS)

(Percentage of Total Exports)

	1938-39	1939-40	1940-41	1941-42	1942-43
Foodstuffs ..	23.3	19.0	21.3	23.8	25.1
Raw Materials ..	45.1	42.9	34.4	28.9	23.1
Manufactured goods	30.0	37.0	43.1	45.5	50.3

[1] The figures in this table exclude imports and exports on government account. The export figures are exclusive of re-exports of foreign merchandise.

TABLE II (*contd.*)

IMPORTS

(*Percentage of Total Imports*)

	1938-39	1939-40	1940-41	1941-42	1942-43
Foodstuffs ..	15.7	21.4	15.2	16.1	7.3
Raw Materials ..	21.7	21.9	26.8	28.8	47.3
Manufactured goods	60.8	55.5	57.0	54.1	44.5

TABLE III

DIRECTION OF TRADE

Exports (Excluding Re-exports) from India in Lakhs of Rupees

To	1938-39	1939-40	1940-41	1941-42	1942-43
United Kingdom	55,51	72,48	64,93	76,85	57,34
Burma	10,03	12,30	16,23	11,74	33
Ceylon	5,09	6,37	7,31	9,76	14,45
Australia ..	2,97	5,50	7,34	12,32	16,13
Canada	2,14	4,12	3,17	6,47	3,78
South Africa ..	1,49	3,04	3,03	5,88	10,49
Other Empire Countries ..	8,14	10,25	14,60	25,93	23,34
United States ..	13,88	24,42	25,90	46,59	27,79
Japan	14,59	13,99	9,00	4,59	..
Egypt	1,23	1,57	2,87	5,98	3,67
Iran	78	(*a*)	57	1,34	4,26
Other Foreign Countries ..	47,72	49,88	32,52	31,47	30,28
Total ..	162,79	203,92	186,90	237,58	187,60
Percentage of the total exports to					
Empire Countries	52.4	55.9	62.4	62.7	67.1
Foreign Countries	47.6	44.1	37.6	37.3	32.9

(*a*) Figures included in the next item.

TABLE III (*contd.*)

IMPORTS INTO INDIA IN LAKHS OF RUPEES

From	1938-39	1939-40	1940-41	1941-42	1942-43
United Kingdom	46,49	41,61	35,94	36,59	29,53
Burma	24,35	31,38	28,62	29,47	1,46
Ceylon	1,18	1,46	2,19	3,41	4,38
Australia ..	2,41	2,39	2,48	4,95	3,34
Canada	91	1,37	2,97	6,73	5,54
South Africa ..	35	60	78	1,24	2,25
Other Empire Countries ..	12,87	14,30	16,93	23,24	14,82
United States ..	9,78	11,86	27,01	34,61	19,01
Japan	15,41	19,29	21,54	11,78	2,84
Egypt	2,19	2,84	2,75	4,69	8,12
Iran	3,48	3,12	3,40	6,04	17,81
Other Foreign Countries ..	36,39	35,06	15,76	16,56	19,16
Total ..	152,33	165,28	156,97	173,27	110,45
Percentage of total imported from—					
Empire Countries	58.1	56.3	57.3	61.0	55.5
Foreign Countries	41.9	43.7	42.7	39.0	44.5

TABLE IV

SHOWS RISE OR FALL IN CRORE OF RUPEES AS COMPARED TO THE PREVIOUS YEAR

Exports (Including re-exports)

	1939-40	1940-41	1941-42	1942-43
Raw Jute	+ 6.43	−11.98	+ 2.62	− 1.41
Raw Cotton	+ 6.35	− 6.57	− 6.69	−12.32
Tea	+ 3.01	+ 1.43	+11.51	− 7.92
Grain, Pulse and Flour	− 2.66	+ 0.88	+ 4.67	− 3.58
Oils	+ 0.37	+ 1.04	+ 0.22	− 1.24
Seeds	− 3.19	− 1.85	+ 0.50	..
Hides, Skins & Leather	+ 2.44	− 1.73	+ 0.04	− 1.21
Jute Manufactures ..	+22.45	− 3.30	+ 8.40	−17.52
Cotton Manufactures	+ 1.41	+ 8.54	+20.47	+ 8.86

TABLE IV (*contd.*)

Imports

	1939-40	1940-41	1941-42	1942-43
Grain, Pulse and Flour	+ 8.05	− 7.46	+ 0.67	−14.71
Sugar	+ 2.86	− 2.96	+ 0.72	− 1.06
Oils	+ 3.02	+ 2.20	+ 0.82	+ 5.93
Raw Cotton	− 0.46	+ 1.42	+ 5.91	+ 0.08
Raw Wool	+ 0.13	+ 2.04	− 0.02	+ 0.18
Chemicals, Drugs, Medicines	+ 1.88	+ 0.57	+ 0.69	− 2.37
Dyes and Colours ..	+ 0.61	+ 1.70	+ 0.59	− 1.54
Machinery	− 4.35	− 3.53	+ 1.90	− 3.20
Cotton Manufactures	− 0.10	− 2.70	− 4.56	− 5.42

The difficulties arising from the war have affected imports and exports differently. Both have, however, increased except for temporary reversals in 1940-41 and 1942-43. But the exports have increased faster than imports, thus giving rise to an increasingly favourable balance of trade which increased from Rs. 16.87 crores in 1938-39 to Rs. 91·32 crores in 1943-44. These figures relate to trade on private account and if figures of trade on government account are included, about which information is not yet available, the balance of trade in India's favour will be higher as the government has exported more goods than it has imported. During the last (1914-18) war the merchandise balance of trade in our favour increased because the exports, after an initial fall, increased as time passed while the imports kept on declining. In the present war the favourable balance of trade has mounted because the exports have increased faster than imports. The total volume of foreign trade, in money terms,[1] increased to Rs. 411 crores

[1]It must all along be kept in mind that because of a tremendous rise in prices the higher figures of imports and exports, in money terms, do not give a correct impression about the quantum of trade.

in 1941-42 and this is the highest total in the post-1930 period.

Exports

Exports from India have suffered less than the imports into India. As a direct result of the war some markets have been closed to Indian exports. In 1939-40 it was estimated that our export trade with the continent of Europe suffered to the extent of nearly Rs. 30 crores. Japan entered the war in December 1941 and was removed from the export map of India. As a result of this we did not export anything to this country in 1942-43 but the effect was felt even in 1941-42 when the exports declined to Rs. 4½ crores as compared to 14½ crores in 1938-39. (see Table III). What is worse, as an indirect result of Japanese war many other markets were closed to us and the loss of Burma alone has cost us much as the exports to this market amounted to Rs. 11¾ crores in 1941-42 but only Rs. 33 lakhs in 1942-43. But there is one redeeming factor in the situation. The loss of markets has so far been made up by the creation of new markets. It is because of this that our total export trade has not suffered much. We have increased our exports to the U. S. A., to some of the empire countries, and to those in geographical proximity to India. But though the total value of exports has not suffered, the relative importance of the different commodities has changed. In the case of some commodities the lost markets have not been replaced by new ones. The exports of groundnuts, for example, suffered because of the closing of the European market and we could not increase exports to the other markets to the full extent of our loss. In 1940-41 the exports of groundnuts recorded a fall of Rs. 3 crores. Similarly, the export of raw cotton has suffered by the elimination of Japan, our best customer, and we could not discover

new markets for this commodity. The export of raw cotton (see Table IV) declined by Rs. 6½ crores in 1940-41, Rs. 6½ crores in 1941-42, and Rs. 12⅓ crores in 1942-43. But some commodities have had a better fate. The export of cotton manufactures has increased all along, the increase being the highest in 1941-42. This has been so because the countries formerly supplied by the belligerents have turned to us for their needs. The exports of tea, oils, grain pulse and flour have increased except in 1942-43, because of certain special causes. As regards jute manufactures, the figures for 1939-40 show a rise of Rs. 22½ crores because our customers were busy building huge stocks but subsequently demand fell off and except in 1941-42 the exports have declined.

Secondly, the tendency for the proportion of manufactured goods to increase and that of raw materials to fall which was noticeable even during the pre-war years has continued during the war years. The proportion of manufactured goods in the export trade of India increased from 30 per cent of the total in 1938-39 to 50·3 per cent in 1942-43 and on the other hand, during the same period, the percentage share of raw materials decreased from 45·1 per cent to 23.1 per cent. (see Table II). The proportion of food-stuffs has remained more or less constant, being 23·3 per cent in 1938-39 and 25.1 per cent in 1942-43. We have every justification to feel satisfied at the continuation of this trend.

Finally, the relative importance of the different markets has changed because of the war. The proportion of India's exports going to the Empire countries has increased from 52.4 per cent (Rs. 85·37 crores) in 1938-39 to 67·1 per cent (Rs. 125·86 crores) in 1942-43, while the offtake of foreign countries declined from Rs. 77. 2 crores in 1938-39 to Rs. 61.74 crores in 1942-43. It is worth while to look at this process in some detail.

In the year 1939-40, the exports (excluding re-exports) to the Empire countries increased from Rs. 85·37 crores (1938-39) to Rs. 114·06 crores and to the foreign countries from Rs. 77·42 crores to Rs. 89·86 crores. Our exports to the U. K. and the U. S. A. recorded a substantial increase. Among the Empire countries the exports to Australia increased by Rs. 2½ crores, Burma by Rs. 2⅓ crores, Canada by Rs. 2 crores, S. Africa by Rs. 1½ crores, and to Ceylon by Rs. 1⅓ crores. Among the non-Empire countries, apart from the U. S. A., the only remarkable increase took place in our exports to China which advanced by nearly Rs. 6 crores. Factors which increased our exports to Egypt, Arabia, Iran, Iraq, and Turkey in 1942 had not yet come into existence. In 1940-41, the exports to the U. K. declined by nearly Rs. 7½ crores which is mostly accounted for by a fall in the exports of raw and manufactured jute, raw cotton and wool, raw hides and skins. The exports to Canada also declined by nearly one crore of rupees, the exports of both jute and tea having declined. The exports to S. Africa remained almost constant while those to Australia, Burma, Ceylon, and New Zealand increased. Among the foreign countries only Egypt and China took more goods from us than in the past year. In 1941-42 out of the increase in exports the British Empire was responsible for nearly Rs. 32 1/3 crores and the foreign countries for Rs. 18 1/3 crores. The share of all the Empire countries, except Burma and New Zealand, increased. These two exceptions are explained by the Japanese domination of the eastern borders of India. Among the foreign countries, the offtake of Egypt, Arabia, Iraq, Iran, and Turkey increased mostly because of cotton manufacturers and because of those goods which these countries could not obtain from their former suppliers. The exports to the U. S. A. recorded a very satisfactory increase while those to China declined

and for this the major responsibility rests upon the difficulties of transport. In 1942-43, the share of Empire countries in the total export trade increased by nearly 4½ per cent though in absolute money terms the exports declined from Rs. 149 crores to Rs. 126 crores. The share of U. K. in trade on private account declined by nearly Rs. 19½ crores. Among the foreign countries the share of the U. S. A. declined from 19·5 per cent (Rs. 46½ crores) to 14·8 per cent (Rs. 27¾ crores) of the total while Japan completely disappeared as an export market. The offtake of Iran, Turkey, and other foreign countries still further increased as they were forced by circumstances to purchase more goods from the Indian market.

Imports

Imports into India have been checked more than the exports because, firstly, the Government of India have instituted a very rigid exchange control and the import of many commodities is entirely prohibited and, secondly, most of our suppliers are busy producing essential war commodities or goods for their own civilian use. But even if we can somehow induce these countries to allow us to import from them the shipping difficulties impose an inevitable check on the extent of our imports.

The imports of various commodities have declined or disappeared, but the most notable reductions have taken place in the imports of grain, pulse, and flour, cotton manufactures, and machinery. The imports of grain, pulse, and flour declined from Rs. 13¾ crores to Rs. 31 lakhs, of cotton manufactures from Rs. 14 crores to Rs. 1⅓ crores and of machinery from Rs. 19¾ crores to Rs. 10½ crores as between 1938-39 and 1942-43. The reduction in the imports of machinery has handicapped our industry and the fall in the imports

of foodstuffs has caused hardships to the consumer. The decline in the imports of manufactured cotton goods has not given much advantage to the Indian producers as they were already supplying a major portion of the market even before the war started but this fall has harmed the consumers.

The proportion of manufactured goods in our imports has decreased from 60·8 per cent in 1938-39 to 44·5 per cent in 1942-43. There was a temporary reversal of this trend in 1940-41 but once again it asserted itself. On the other hand, the proportion of raw materials has increased from 21·7 per cent in 1938-39 to 47·3 per cent in 1942-43. The proportion of foodstuffs in our imports has declined from 15·7 per cent in 1938-39 to only 7·3 per cent in 1942-43. This seems to be a purely wartime decline because many of our former suppliers of foodstuffs are in enemy hands. As soon as the war is over we shall import more food-stuffs from these areas. Some of the foodstuffs we import cannot be produced in India in sufficient quantities and hence we have to rely upon imports.

In 1939-40, as compared to the past year, the imports from Empire countries increased by only Rs. 4½ crores as against an increase of Rs. 8 ⅛ crores from foreign countries. Among the Empire countries, the imports from the U. K. and New Zealand declined, those from Australia remained constant, while the imports from Ceylon, Burma, and Canada increased. Among the foreign countries the imports from Germany, Italy, and other European countries declined though as yet the war did not have its full effect. The imports from the U. S. A. increased by Rs. 2 crores and those from Japan by more than Rs. 3¾ crores as compared to the previous year and this reveals an increasing hold by these two countries on the Indian market. As a result of the war many of our former suppliers were unable to supply

us with goods and we had inevitably to turn to these countries and they were only too anxious to capture the Indian market as much as possible. This tendency also continued in 1940-41 when the imports from Japan increased by Rs. 2⅓ crores and those from the U. S. A. by nearly Rs. 15 crores. (see Table III). During this year the imports from the European continent, except for Switzerland from which country the imports remained almost constant, more or less disappeared. Iran and China increased their exports to India while Egypt was successful in maintaining them constant. Among the Empire countries the share of the U. K. still further declined by nearly Rs. 5½ crores to Rs. 35.94 crores. The other Empire countries, except Burma, increased their share in India's imports and the tendency for the Dominions to capture the Indian market at the cost of the U. K. continued to operate. In 1941-42, the domination of Japan came to an end with its entry into the war but imports from the U. S. A. increased by a further Rs. 7½ crores and this country exported to us more than 3½ times of what it exported in 1938-39. The trade from the continent of Europe almost ceased. China just succeeded in maintaining her trade with us while Arabia, Iran, Iraq, and Egypt obtained a markedly greater share in our imports. In 1942-43, the hold of the U. S. A. on our market weakened both absolutely and relatively as compared to the past year. Our imports from this country declined from Rs. 34·61 crores (i. e., 20 per cent of the total) to Rs. 19 crores which formed only 17·2 per cent of the total. But this slackening of trade may as well prove temporary and in the future we may have to import more goods from this country. The share of Egypt, Iran, Iraq, and other foreign countries in our import trade further increased.

Conclusions

This short study leads us to some interesting conclusions. In the first place, during the war period our imports have suffered relatively more than our exports. A rigid import control and the dominance which Japan exercised on our imports before it entered the war explain this phenomenon. The relatively smaller increase in imports or their absolute decrease in 1940-41 and 1942-43, has caused discomfort and annoyance to the consumers but this has not been an unmixed evil because, except probably in the case of cotton textiles, it has stimulated our industrial activity. The fall in the imports of machinery and essential dyes and colours have, of course, very much handicapped us. Our exports to the European and Far Eastern countries declined as they passed into enemy hands but this did not inflict an irreparable loss on us because the commodities so released were partly used by our own industry and were partly supplied to other markets which were too anxious to receive them. It is true that on account of the readjustment the producers of certain commodities, such as raw cotton and groundnuts, have suffered because the fall in exports caused a glut in the home market and it was not possible to find sufficient alternative outlets. But such commodities have been few and in any case the magnitude of the loss, when the total situation is considered, is not much.

Secondly, the proportion of manufactured goods in exports has constantly increased and that in imports has decreased throughout the period. Similarly, the proportion of raw materials in the exports has substantially decreased while the proportion of raw material imports has gradually increased. This is a continuation of the tendency which was noticeable even before the war and we are justified in feeling jubilant about it as the ten-

dency reveals a greater industrialisation of our country.

Finally, now India does more trade with the Empire countries than in the past, but as within the Empire the U. K. has gradually been yielding to the Dominions, though in 1942-43 the U. K. has gained some ground so far as the proportion of its share in the imports is concerned. The U. K. supplied only 21·1 per cent of India's imports in 1941-42, as compared to 30·5 per cent in 1938-39, but in 1942-43 this share increased to 26·7 per cent while the share of the other Empire countries after rising from 27·6 per cent (1938-39) to 39·9 per cent (1941-42) declined to 28·8 per cent in 1942-43. Similarly, India exported 30.6 per cent of the total to the U. K. and 36·5 per cent to other members of the Empire in 1942-43 as against 34·1 per cent to the U. K. and 18·3 per cent to the other parts of the Empire in 1938-39. The other members of the Empire have gradually been elbowing the "Home" country out of India's trade. The children have proved jealous of the mother but this will surprise no one in this capitalist world. Among the foreign countries the U. S. A. and Japan captured the Indian market in the earlier period of the war but the domination of Japan came to an end in 1941-42 and that of the U. S. A. considerably weakened in the subsequent year.

III

Organisation of Export Trade

The organisation of India's foreign trade is still in a very primitive stage. A major portion of our foreign trade passes through the hands of petty export traders. They are located in the port towns and some of the bigger ones also have branches in the up-country centres. The export trader, either in the local market in the port towns or through his agents in the

up-country centres, buys commodities such as raw jute, raw cotton, oil-seeds, tea, tobacco, hides and skins, and ships them abroad. In the case of manufactured goods these export traders enter into direct contracts with the manufacturers. In the foreign country the exported goods are sold to the merchant houses, to the wholesalers, or by auction in the open market. Some of our exports pass through the hands of Indian branches of foreign merchant houses but often these Indian branches purchase their requirements through the petty export traders in our country. In some rare cases—Indian iron and steel and cement, for example—the marketing organisation in these industries have direct contact with the wholesale buyers abroad.

In the past this organisation has probably performed a useful service but in the future it is not likely to work satisfactorily. The export traders are generally persons of small means and, except for the local Traders' Associations formed for the purpose of ventilating their grievances against the government, they are thoroughly disorganised and operate on their own account without co-operation with fellow traders, with the consequence that they are unfit to stand competition from well-organised rivals in foreign countries. Moreover, the object of these traders is not to safeguard the interests of the Indian manufacturers and producers by developing and enlarging the foreign markets. They only look to their own profits and if they have been successful in holding the foreign markets in the past it has been due more to the nature of the commodity they handled than to their own effort. In the past we mostly exported raw materials, coarser qualities of cotton textiles, jute goods, some types of iron and steel products and such other commodities for all of which we easily found customers partly because the raw materials supplied by us were urgently needed by foreign

manufacturers and, in some cases, we enjoyed monopoly powers and partly because most of the highly industrialised countries, except Japan, specialised in the production of finer quality goods, and it was not very difficult to sell the coarser quality goods produced by us. Moreover, these export traders could sometimes sell at very low prices because they paid low prices to the unorganised producers of raw materials in India and they sold the commodity in the foreign market at a price which just gave them the usual profit margin. This spoiled the foreign market from the point of view of the Indian producer. These export traders, of course, never made any effort to study tastes of consumers or the requirements of the manufacturers in the importing countries. In consequence serious complaints have often been made against us. It has been complained that goods have not been supplied according to sample, finish and packing have been defective, contacts have not been established with customers in the foreign markets, the agents and representatives of foreign customers have not been given the consideration which they deserve, letters of enquiry addressed to Indian exporters and producers have not been replied and, in general, a great carelessness is shown by the export trader in dealing with the export market. These defects handicapped our export trade even in the pre-1939 period but in the post-war world they are bound to prove fatal. Some new factors have entered the situation which make it imperative for our exporters and producers to be more careful if the foreign markets are to be retained and enlarged.

In the first place, the post-war trade of our rivals is likely to be organised on more scientific lines than in the past and in order to face their might we have also to organise ourselves. It does not need much stressing that our disorganised petty traders stand no chance

of survival against powerful foreign rivals. Moreover, thanks to our bad luck, one such mighty organisation, the United Kingdom Commercial Corporation, has already entrenched itself right in our own country. The U. K. C. C. has large funds, a huge organisation, and government backing. This organisation has acquired good experience and valuable rights during the war and, for all we know, it might be retained after the war either under its original name or some newer one. The Indian exporters will then be faced with a double problem of fighting outsiders as well as a favoured "cousin", and organisation alone gives some chance of success. Secondly, the nature of our foreign trade has also changed. As already emphasised we now export more of manufactured goods and less of raw materials and, in view of our greater industrialisation, these manufactured goods will not only be of coarser quality but also of finer ones. So that, unlike the past, we will not get customers without effort. In the past our customers were only too anxious to buy our goods but in the future we shall have to induce them to do so. The chief factors in this struggle for markets will be the *price* and the *quality* of the goods sold. And, in view of the fact that during war the producers in some foreign countries have made much greater progress than the Indian producers in the field of industrial technique and scientific research, we shall find this task of producing goods of the required quality at competitive prices quite difficult. We shall have to go in step with our rivals, if not a few steps ahead, in order to snatch some markets from them. Finally, past experience has taught us that in matters of trade expansion political support plays a very important part. The producers in foreign countries have the backing of government which is always ready to help in the expansion of trade, as in other matters. We are under foreign rule and we do not as yet know what attitude

the future government of India will be willing and able to take in connection with foreign trade. In case our foreign trade policy is dictated from outside or the future government of India chooses to owe allegiance to some obsolete doctrines of *laissez faire* we shall have to look out for ourselves. In that case a much finer trade organisation, than would otherwise have been necessary, would be indispensable.

The producers will have to take a direct interest in the trade organisation dealing with their respective commodities. One possibility is that a joint stock trading company may be formed for each major export industry and for each group of allied minor and small scale industries. The share capital of each company will be contributed by the producers concerned. Its profits and losses will be distributed among the various producers on a pre-determined basis depending upon the quantity supplied by each for export. The company will study the foreign markets by sending expert representatives abroad, will establish contacts with wholesalers and retailers in foreign countries, will study the special requirements of the customers in these markets. The quality of goods will be guaranteed because the trading company will be in a position to supervise it. A competitive price will be charged for each brand of the commodity. If our rivals choose to offer cut-throat competition this company will meet the challenge. Its very existence will make the foreign rival think hard before it launches the attack. The Indian producers will thus be able to develop and enlarge foreign markets for their goods.

It is likely that some difficulties will be faced in the initial period. All the producers may not choose to join this organisation and an obstinate minority may try to take advantage of the organised foreign markets without paying the costs. But this minority will soon

find itself in a hopeless condition. The trading company will advertise and push some particular brands and its products, because of a more careful study of the foreign market, will confirm more to consumers' tastes and will thus be preferred. Moreover, there is no reason why the price charged by the producers outside the trading company should be lower, quality for quality. On the other hand, because of a large-scale marketing organisation the trading company will be in a position to quote the cheapest price. Secondly, some markets may be too small to justify the operation of the trading company. In that case the device of "joint representation" will be used and a number of trading companies interested in allied commodities may operate together, thus utilising the services of their representatives or sales organisations to best advantage. Finally, the formation of these trading companies will eliminate a large number of export traders and it might be argued that it is unjust to create this hardship. It is true that these poor individuals will suffer but we have to pay a price for setting our house in order and, moreover, there is no reason why at least some of these traders should not be re-employed by the trading companies. In any case, even if the trading companies do not come into existence, these petty export traders will have little chance of survival against the U. K. C. C. and similar other organisations.

It is worth noticing that the organisation suggested by us will be able to stand on its own legs without government support. Moreover, the organisation will be further extended and the trading companies will form themselves into a Federation and this body will take up the cause of Indian exporters not only with the Indian government but also with foreign governments if some political difficulties arise, as is bound to happen in the future, as in the past. The Federation will also

look after the facilities of finance and shipping available to the Indian trading companies and ultimately it might be necessary for this Federation to have control over these subsidiary services. Finally, because the trading companies are monopolistic organisations and can give concessions as well as take them, they will find it possible to come to terms with their prototypes in foreign countries about the division of markets and such other matters of common interest.

CHAPTER IX

MONEY AND CAPITAL MARKETS

By P. C. JAIN, M.A., M.SC., (ECON.), LONDON
University of Allahabad

The money markets lend and borrow money on a short term basis; the capital markets on the other hand deal in long-period funds. Some authors prefer not to distinguish these two markets as separate institutions—for them all the lending and borrowing operations can very well be studied in the money market, but such a practice has caused confusion because, though these two markets are interrelated and touch at various points, some of their problems are peculiar and deserve a separate study.

The money market of a country consists of the Central Bank (in our country the Reserve Bank), the commercial banks, discount houses, bill brokers on the investing side and industry, trade, and business and the government on the borrowing side. It transacts business in promissory notes, trade bills, and Government paper. The loans are made for short periods at low rates of interest, and the investing institutions regard these invested funds as particularly liquid. The importance of the money market to the economic system of a country is three-fold. In the first place, the Central Bank of every country, in the interest of monetary stability, finds it necessary to control the interest rates and, as far as possible, the volume of funds available in the market. This work is done with the help of two technical devices

known as 'open market operations' and the 'discount rate policy.' It might here be explained that every Central Bank holds some trade bills and securities, including Government paper. If it wants to contract the funds in circulation, this can successfully be done in a developed money market by selling these securities to the public. In this way some money passes out of circulation and is retained by the Central Bank in exchange for the securities which have now passed into the hands of the individuals and institutions who have parted with their money. If on the other hand it is intended to expand the funds, the Central Bank buys such securities. These buying and selling operations are known as open market operations. Similarly, the money market ultimately depends for accommodation on the Central Bank which charges an interest rate for such discounting facility—the rate being called the Bank Rate. Any variation in this rate, in an organised money market, has a direct influence on the other rates. This is the discount rate policy. A successful working of these devices presupposes the existence of a well organised money market, such as existed in Great Britain. Secondly, the money market is a very good barometer of credit conditions in a country, because if there is a pressure on the banks they withdraw their short-period investments, which as we have already noticed they consider most liquid, and this naturally raises the money market rates. Such a situation indicates a stringency of funds in the market. Similarly, a superabundance of funds reveals itself in low rates. Incidentally, it will be noted that the money market affords one of the most convenient methods to the commercial banks to invest their spare funds from day to day. Finally, it is through the money markets that the credit system of one country is connected with that of the other. In the modern world this is an important consideration.

The capital market on the purchasing side embraces

individual and institutional investors such as the saving banks, the commercial banks, insurance companies, building societies, mortgage banks, trust companies and investment trusts; on the selling side there are business and public utility corporations, which issue securities; and between these are Stock Exchanges, brokerage establishments, and investment banking houses which originate the issues and then provide a market where they can be shifted from one investor to another.[1] It has to be clearly realised that in every country an appreciable portion of the fixed and working capital for industry is drawn from outside[2] the regular capital market; funds invested by people (including friends) in their own business without recourse to the capital market come under this category. Secondly, in recent years borrowings of the Government have also played an increasingly important part in the capital market.

It is well to remember three elementary points in this connection. In the first place, in every country there is not only one money market but a number of separate markets and we have to consider the aggregate situation that arises from the combined activity of all these markets put together. The same applies to the capital market of our country. We have also to study in some detail the links which connect these various markets. Secondly, the funds at the disposal of these markets are ultimately based on the net savings that the members of the community are able to make from their income. It is now a recognised fact that the proportion of income saved depends upon various complicated factors which differ from country to country and from time to time. Finally, the depressions and revivals of trade and industry

[1] See Prof. K. Field's Corporation Finance, 1939 ed., p. 186.

[2] cf. Mr. Hawtrey and Prof. A. T. K. Grant, Journal of the Royal Statistical Society, 1939, pp. 520-25.

have a direct influence on the activity of these markets. In times of a trade depression the number of trade bills and consequently the discounting activity in the money market gets reduced. The prospects of lower profits in times of trade depression reduces not only share prices but also capital issues for the development of business enterprise.[1] Activity is again on the upturn with the setting in of trade revival.

2. *Market Funds*

In India it is as yet an impossible task to get an exact quantitative idea of the funds that seek investment every year in the Money and Capital markets. The shroffs and mahajans who discount a large amount of domestic trade bills do not publish any figures about their resources; our information about banks with a capital and reserve of less than Rs. 5 lakhs is very meagre, though the Reserve Bank of India has attempted to summarise some information about these banks in its 1939-40 annual report; information about people's investments in lands and buildings is completely unknown. The uncertainty about the exact amount of foreign capital invested in India causes further difficulty.

We have emphasised above that the funds in the money and capital markets are ultimately based on annual net savings of the community. The savings of the Indian peoples every year pass into the following channels.

(*a*) Investments in land, buildings and money lending.

(*b*) Cash and ornament hoardings.

(*c*) Deposits at the Bank.

[1] cf. League of Nations: World Economic Survey, 1938-39, page 93.

(*d*) Postal Cash Certificates and Post-office Saving Bank deposits.

(*e*) Investments in the shares, debentures, and bonds of the Joint-Stock Companies in India.

(*f*) Investments in family industry and business.

(*g*) Payment of Insurance premium.

(*h*) Investments in foreign countries.

(*i*) Loans to the Government.

We do not have quantitative information about most of these items: the available data give us only an incomplete indication. Some available figures have been collected in Table I.[1] In this table figures in columns 1, 2, and partly in 7 are compiled from the Reserve Bank of India Report on Currency and Finance for 1939-40. The remaining figures are taken from the Statistical abstract for British India. Figures after 1937 exclude Burma; in column 6 figures for Burma are excluded from the beginning. Column 7 gives the permanent rupee debt of the Government of India. Figures in column 3 include private deposits of the Imperial Bank of India, deposits of joint stock banks with a capital and reserve of Rs. 5 lakhs and over, and the Indian deposits of the Foreign Exchange Banks.

[1] The figures in this Table have not been brought uptodate as, due to financial disturbances created by the war, such statistical summaries do not give a correct impression.

method of calculating national savings is to find out the percentage of income that people in different income groups save every year. This method is also rendered very difficult in India because, firstly, we do not have an exact idea about our national income and, secondly, we are not in possession of all the facts necessary to determine the percentage of income that people generally save. We might, however, estimate that in India the proportion of national income saved every year ranges from 8 to 12 per cent. This estimate is purely arbitrary and savings in our country, as elsewhere, depend on very complex factors. A large majority of the people do not save anything; some save as much as 50 per cent of their income or even probably more. Savings also differ with trade activity, the prevailing rates of interest, and various purely psychological factors. It appears most likely that the proportion of national income saved is high if, firstly, a large portion of the national income tends to be concentrated in fewer hands and, secondly, the standard of living of such moneyed people is low. In India both these conditions are to some extent satisfied, but the proportion of national income saved is low because the absolute income of a vast majority of people is even hardly sufficient to meet their current expenditure; moreover, the low productivity of labour combined with past indebtedness and wasteful habits of expenditure, and the relative absence of institutions that encourage small savings force the national saving to be low. Under the present conditions in the post-1929 period taking all the factors into consideration our estimate is not far from the truth, though no scientific basis of calculation can be attached to it. It is worth notice in this connection that for Great Britain, Mr. Colin Clark (The Control of Investment, 1934, p. 9) is of opinion that 'the amount of the national savings in a normal year is about £ 400 millions, or rather under 10 per cent of the

national income. Before the war a considerably higher proportion of the national income was saved, probably about 17 per cent.' Mr. J. M. Keynes in his Treatise on Money, (Vol. II, page 112) estimated the British national savings for 1929 to total 12 to 15 per cent of the national income.

If we arbitrarily accept our annual national income before 1939 to range between Rs. 2000 and Rs. 2500 crores and we take the average percentage of income saved to range from 8 to 12, the new annual savings seeking investment in all possible directions before 1939 may be anything between Rs. 160 crores and Rs. 300 crores. As the figures in Table I show us, only a small portion of these new annual savings came into the active money and capital markets. There is therefore, still much scope for tapping the Indian savings for investment in Indian Industry.

3. *Money Market Rates*

In India the money market resources are used mostly to finance the movement of food-stuffs and raw materials from up-country towns to the ports, to finance the transaction on the Bullion Market and the Stock Exchanges, to help the commercial banks to tide over temporary difficulties by means of inter-bank call loans. Temporary bank overdrafts and loans are sometimes used to overcome the shortage of working capital for industry. Calcutta and Bombay are our chief money markets and these two act as connecting links, first, between the different money markets in the local commercial centres in India and secondly, between the Indian and the foreign financial systems.

In the Indian money market some rates deserve special attention. The Bank Rate is the standard rate at which the Reserve Bank of India is prepared to buy or redis-

count bills of exchange or other eligible commercial paper. The privilege of regulating the Bank Rate was enjoyed by the Imperial Bank before 1st April, 1935, at which date the Reserve Bank of India came into existence. In the past the Bank Rate used to be high; between 1929 and 1932 it varied from 8 to 5 per cent. The rate remained steady at 3½ per cent between 16th Feb. 1932 and 27th November, 1935. In pursuance of the cheap money policy the Bank Rate has been deliberately lowered to 3 per cent at which level it has been maintained ever since November 28th, 1935. The rate on demand loans of the Imperial Bank, which before 1935 was also the Bank Rate, represents broadly the minimum return obtainable on short-term accommodation.[1] Deposit rates are paid by the joint stock banks for the fixed and current deposits of individuals and business firms. The Call-Money rate is the rate for spare money seeking investment for 24 hours and more: such money is lent out between banks themselves, to the Stock Exchanges, to the bills market. The Imperial Bank Hundi rate is the rate at which the Imperial Bank discounts first class three months bills; there is no definite relation between this rate and the Imperial Bank rate for demand loans. The Bazar bill rates, for which, however, there are no official quotations, are those at which the bills of small traders are reported to have been discounted by shroffs: these rates are generally higher in Calcutta than in Bombay. During 1925-29 the Bazar bill rates were as high as 10 to 11 per cent in Calcutta and 9 to 10 per cent in Bombay. In the post-1929 period these rates have come down and in recent years they have not been very high: the rate in Calcutta has ranged from 6 to 7 per cent ever since July 1938 and in Bombay

[1] cf. S. K. Muranjan, Modern Banking in India, 1940, pp. 38-71.

for a long time the rate did not exceed 5¼ per cent though in the 1940 busy period it jumped up to 6 per cent.

There are many peculiarities of the Indian money market. In the first place, there is no definite relation between the different rates in the Indian money market. It is true that international events influence these various rates and the cheap money policy since 1935 has pulled most of them down, but there is no precise and definite interrelation between the various money market rates such as existed in Great Britain. In India the various rates can sometimes move in diverse directions.[1] Secondly, the funds in India are of a seasonal nature. This peculiarity is caused by the necessity of financing the movement of agricultural commodities. The busy period, roughly speaking, extends from October to March and during this period all the rates have a tendency to rise; the slack season falls from May to September and during these months the call-money rates come down to ¼ per cent.

The call-money rate in Bombay, even before the commencement of the cheap money policy, had come down to ¼ per cent; the Bazar bill rates in October 1935 were as low as 3 per cent in Bombay and 5 to 6 per cent in Calcutta. The money market, for the first time since 1935, became firmer in January 1937 and the call rate in Bombay improved to 1½ per cent. This was due to increased industrial and trade activity, rise in commodity prices, and the increased demand for financing crop movement to ports. The improvement, however, proved short-lived and by April 1937 the rates again came down. Then followed a period of stagnation. It was only in January 1939 that conditions improved and the inter-bank call rate increased to 2¾ per cent in Bombay; it was the highest rate since June 1935. The

[1] cf. S. K. Muranjan, loc.cit.

other rates also experienced an increase in sympathy with trends in the London market. But with the coming in of the slack season the call rate again declined to $\frac{1}{4}$ per cent. It was only in the middle of the busy season, January 1940, that the call rate again improved to 2 per cent in Bombay and to $1\frac{3}{4}$ per cent in Calcutta. This condition, with some fluctuations, continued to the end of March 1940. In April the Bombay call rate varied between 2 per cent and $\frac{1}{2}$ per cent, but with the onset of the slack season the rate again came down to $\frac{1}{4}$ per cent in Bombay and $\frac{1}{2}$ per cent in Calcutta. This condition of low rates, with only minor changes, has continued ever since and even in the busy period the call money rate now remains low. This is an unusual feature. It must be admitted that now there is less shortage of money at the height of the busy season than used to be before the Reserve Bank of India came into existence.

A third peculiarity is that the cotton mills in Bombay and Ahmedabad, at least up to 1930, not relying so much upon the money market, drew a good portion of their working capital from public deposits. In more recent years this practice has to a large extent been given up. In Ahmedabad in 1930 such deposits for 56 mills totalled Rs. $4\frac{1}{2}$ crores forming about 39 per cent of their total financial requirements.[1] But this method, though it has certain advantages, is open to at least two severe defects. It causes the mills to be less careful in their working and, secondly, in times of depression and crisis a general run on the mills places them in an awkward position, especially if they have utilised part of these deposits for fixed capital. The separation of the banking and manufacturing func-

[1] cf. S. K. Basu's Industrial Finance in India, 1939, pp. 145-151.

tion of these mills, it is widely agreed, is bound to be to the best advantage of all concerned.

Finally, the government borrowings play an important part in the Indian money market. It is believed that before the 1914 war not more than Rs. 5 crores were borrowed from the Indian market in any one year; during the war and post-war years, 1917-18-19, nearly Rs. 130 crores were borrowed; in the post-war period, upto 1930, the government borrowings in the Indian money market have averaged nearly Rs. 30 crores per year.[1] In the subsequent ten year period, 1930 to 1940, the annual cash borrowings, due to the loan conversion policy among other reasons, have not exceeded 15 to 20 crore of rupees. Due to war finance, the Government of India borrowings in the Indian market have considerably increased in more recent years though it is difficult to make a reliable estimate about the net annual increase. The total rupee debt of the Government of India at the end of 1942-43 amounted to Rs. 1208·45 crores. The Government is a serious competitor of Indian industry in the Indian market. The total amount of central and provincial government treasury bills including intermediaries, to take only one item, sold to the public in 1942-43 amounted to Rs. 376·28 crores and the total bills outstanding at the end of March 1943 stood at Rs. 265·5 crores. These bills form a substantial portion of the bill holdings of the Scheduled Banks and the government borrowing has a very significant influence on the money market rates. It is, therefore, necessary that the government borrowing policy should be accommodated not only to considerations of public finance but also to the needs and conditions of the money market.

[1] cf. Dr. D. L. Dubey, Indian Public Debt, 1930, pp. 303-304.

4. *Indian Bill Market*

An organised bill-market has not yet come into existence in our country. There are many causes for it, the most important of them probably are: the seasonal nature of funds in the Indian money market and, therefore, an irregular supply of call money; the high stamp duties till recently imposed on usance bills (*mudati hundis*); the great diversity in the form and conditions under which the various types of hundis (*trade bills*) are issued. An organised bill market, however, has many advantages for the Indian economic system and hence it has to be properly developed. A bill-market greatly facilitates the movement of commodities by paying the sellers much earlier than the dues are realised from the buyers. It provides the short-term finance in a most convenient fashion. This because the seller of the goods, for example, can draw a trade bill on the buyer and after it is accepted by the buyer and his banker, the bill can be discounted in the market; thus the seller obtains his dues immediately; the bill-market holds this bill till its maturity when the buyer, who has probably disposed of his goods by this time, is called upon to meet his liabilities and pays up. Secondly, the bill-market affords a very suitable opportunity for the investment of short period funds of our banking system. Both these functions, it will be agreed, are vital to the economic prosperity of our country. But the bills discounted as yet form a very low percentage of the total liabilities of the Scheduled Banks, and this percentage has remained almost constant for the last few years. In 1942-43 bills discounted totalled only Rs. 2·18 crores. It is true that this situation is due partly to a stagnation of trade and partly to an increasing use of bank overdrafts and advances in order to finance the movement of goods. The total number of banking

offices of the Scheduled Banks in India and Burma were 2141 on 30th June, 1944 as compared to only 723 on 31st Dec., 1935. The increasing importance of branch-banking in India, as also in Great Britain and the U. S. A., had retarded the progress of the bill market. In our country, however, the majority of traders do not have a sufficient standing to secure overdrafts and advances from the banks and, secondly, the size of our country renders it impossible for branch banking, at least for a few decades, to replace the bill market. It is, therefore, of the highest importance that we pay due attention to developing our bill market.

The Indian Central Banking Enquiry Committee 1931, realising the great importance of the bill market made various suggestions for developing it. It is a matter of regret that in spite of the functioning of the Reserve Bank of India for many years, most of these recommendations have not yet been realised. We have already noticed that the heavy stamp duties on usance bills greatly discouraged their use. The Central Banking Enquiry Committee had recommended the complete abolition of this duty within five years. It was, however, only in January 1940 that persuaded by the Reserve Bank of India,the Central Government reduced the duty on usance bills to annas two for every 1000 rupees or part. This, though below our expectations, is a significant step forward. But the Reserve Bank of India has as yet done nothing to standardise the custom regarding hundis, to encourage the establishment of warehouses and local institutions to do the acceptance work, and to induce the Scheduled Banks to include a larger proportion of trade bills in their portfolios. It is not suggested here that the task is easy or the difficulties to be surmounted are only few in number; the task, however, is not impossible.

5. *Trends in Company Investment*

We have to depend on the Indian capital market and on foreign capital, to the extent to which it is available, in order to reconstruct many of our old industries and to start some new ones. Any effort at economic planning also presupposes the availability of sufficient capital funds. The past trends in the Indian capital market and the total amount of Indian savings induce us to take a hopeful view of the future.

The Indian capital market has worked fitfully in the post (1914-18) war years. Periods of stagnation have alternated with periods of intense activity. The three active periods have been: (1) 1920-1923. (2) 1932-33. (3) 1935-37. In 1932-33 the activity was rather mild and sugar, insurance, and banking companies and to some extent coal mining, engineering, and iron and steel companies experienced expansion. In ten years, 1930 to 1940, investors put over Rs. 11 crores of Indian capital into the sugar industry. Moreover, during certain periods they have not been slow to respond whenever an appeal has been made to them. These facts clearly demonstrate the great potentiality of the Indian capital market.

TABLE II

NEW JOINT STOCK COMPANY FLOTATIONS : 1935 TO 1941

Year	*Number*	*Aggregate Authorised Capital Crore Rs.*	*Average Authorised Capital per Company Lakh Rs.*
1935-36 ..	993	49.19	4.95
1936-37 ..	1175	109.05	9.28
1937-38 ..	986	53.12	5.39
1938-39 ..	996	45.27	4.54
1939-40 ..	1005	35.78	3.56
1940-41 ..	978	46.37	4.74
April/Dec. 1941[1] ..	903	41.26	4.57

[1] More recent figures are not yet available.

TABLE III

PERCENTAGE INCREASE IN THE PAID-UP CAPITAL OF SOME RUPEE COMPANIES

Between 1920-21 *and* 1923-24		*Between* 1934-35 *and* 1936-37	
Name of Industry	*Percentage*	*Name of Industry*	*Percentage*
Iron Ore Mining ..	205.8	Soap, Candles etc. ..	232.5
Cement etc.	194.0	Sugar Manufacturing ..	42.8
Iron, Steel, Shipbuilding	96.8	Tanneries and Leather ..	20.7
Cotton Mills	65.8	Chemicals	20.6
Paper Mills	55.3	Rubber Plantations ..	14.0
Public Utility Companies	52.9	Cement etc.	10.4
Coal Mining	42.3	Rice Mills	8.0
Jute Mills	28.0	Jute Mills	5.2

(Figures in this Table include Burma and have been calculated from various Reports on Joint Stock Companies).

The net capital investment in Indian companies during 1920-22 totalled over Rs. 107 crores.[1] As Table III shows us, during these years, our iron and steel, cement, coal, cotton, and paper industries attracted most of the capital. These industries were popular with the investor because he considered them necessary for the war and post-war needs. But the business people and the investors both miscalculated the possibilities of the post-war boom and, when it broke up, there was a large number of company failures; the investors were disillusioned and withdrew into their cells. Then followed a period of prolonged inactivity. It can hardly be denied that the investor would have put his savings into industry more uniformly if he were saved this shock.

In 1935-37 the increased activity in the capital market was of a more genuine type. The paid-up capital of Joint Stock Companies in India and Burma amounted to Rs. 311½ crores; this marks an increase of Rs. 7½ crores over the previous year. Many entirely new companies were floated: within two years ending March 1937 the paid-up capital of newly registered companies increased by more than two hundred per cent. The most important industries to attract the investor were the chemicals, soap, leather, and sugar. This increased activity, however, has to be considered along with the setback that coal mining, cotton pressing and ginning, oil and flour milling, iron and steel, engineering, and plantation industries suffered. On the whole we might say that there was a net expansion in industrial enterprise in India during these years.[2]

There are many causes for this increased activity.

[1] Vide the Indian Central Banking Enquiry Committee's Report, 1931, Volume I, Part I, page 300.

[2] Also see an article by the author in the "Capital", for July 31, 1941, page 156.

In the first place, the economic depression came to an end in Europe and America towards the end of 1933 and, as usual, its repercussions were felt in India only by 1936. Hence, the development in India was delayed. Secondly, we have followed a cheap money policy for the last six years and the rates of interest in our country have come down. We do not have any figures about the long-and short-term rates of interest in industry, but the Bank Rate has been reduced from about 7 per cent in 1931 to 3 per cent as from Nov. 28, 1935. The cheaper rates of interest, as generally happens, encouraged the business people and they met good response in the market. Finally, the investor during this period had large amounts of spare funds at his disposal partly because we exported 39½ million fine ounces of gold valued at Rs. 338 crores during 1930 and 1939 and, partly, because on account of various legislative measures investment in money-lending, land, and zemindari became uncertain and unprofitable. The post-war popularity of investment in building and houses also came to an end except probably in Bombay. The investor, therefore, was, so to say, compelled into bravery and invested his funds in industry.

The 'boom' conditions, however, came to an end in 1937 and a period of stagnation followed. This was due, partly, to the trade depression which set in and, partly, to the wave of industrial disputes which swept the country at this time[1]. As is evident from the Table in the next chapter, the number of industrial disputes and the number of working days lost recorded a marked increase in 1937 and subsequent years. This naturally discouraged investment of new capital. Though in more recent years there has been

[1] *Annual Market Review*, 1938, issued by Messrs. Prem Chand Roy Chand & Sons Ltd. (Bombay), p. 18.

some revival in the investment market the 'boom' conditions of 1936-37 have not been equalled.

In 1939-40, the number of new companies registered increased by one per cent but the authorised capital decreased by 21 per cent as compared to 1938-39. In spite of this fall, however, the new capital invested in sugar, iron and steel, engineering, transport, and banking companies recorded an increase. Moreover, the average authorised capital per company which had increased to a record figure of Rs. 9.28 lakhs in 1936-37 declined to Rs. 3·56 lakhs in 1939-40. (See Table II). This was due partly to the encouragement that small scale industries received and partly to the uncertainties of war conditions. In 1940-41, the number of new companies registered declined by 3 per cent and the authorised capital increased by 30 per cent as compared to the past year. The average authorised capital per company also increased to Rs. 4¾ lakhs. The authorised capital of newly floated iron and steel, shipbuilding, and transport companies was higher than in the past year while that of banking, chemicals, sugar, engineering, leather, and tea plantation companies recorded a decline. In the 9 months, April to December 1941, the total subscription of 903 companies floated amounted to Rs. 2.15 crores. The jute, cotton, sugar, and paper mills did not attract much capital while iron and steel, shipbuilding, and chemicals were popular with the investor.[1]

In 1940 and 1941 the capital market, on the whole, remained dull due to uncertainty of the war situation, and in view of the impending danger of Japanese attack the investors kept away from the market. These conditions continued early in 1942 and the Congress Movement in August further disturbed the market and it did not return to normal before November 1942, when investment activity was resumed. Between

[1] *Indian Finance*, November 21, 1942, pp. 827-28.

November 1942 and the end of 1943, though exact figures are not available, the banking and chemical companies have attracted the investor's attention in preference to others. But the market, on the whole, has remained comparatively dull and inactive.

6. *Accumulation of Savings*

Two facts appear to stand out clearly. In the first place, it is positively wrong to assert that there is a paucity of investable funds in India or that the Indian investor cannot be made industrially-minded. The past events amply support our contention. Secondly, much of the difficulty is due to the fact that the Indian investor has not enjoyed adequate facilities to accumulate his savings and the proper guidance to invest whatever savings he has been able to make. The problem now is two-fold: to increase the total sum of national savings and to encourage their investment in industry.

The national savings cannot increase unless our income increases faster than our standard of living or, the income remaining the same, the standard of living declines. These achievements take time. It is, however, possible to prevent some wasteful expenditure if adequate facilities are given to people to accumulate small savings. The only institution which does this splendid work, in our country, on a large scale, is the Post Office savings bank, but the facility provided by it is completely insufficient for a vast country like India: the P. O. savings bank deposits after rising to nearly Rs. 82 crores in 1938-39 declined to about Rs. 52¼ crores in 1942-43.

Various suggestions have been made in order to give greater facility for the accumulation of small savings. Messrs. Wadia and Joshi[1] have suggested a large ex-

[1] Money and Money Market in India, page 385.

tension in the P. O. savings bank system. If this is combined with proper propaganda it is likely that the savings bank deposits will be greatly increased. A second suggestion is that state-owned and controlled banks should be started in India so that at least every town with a population of 5,000 and over has a branch. These banks will also help to encourage the accumulation of small scale savings.[1] This is a splendid suggestion but, unfortunately, it is unpracticable under the present day political and economic conditions in India. The third suggestion is that people should be made more insurance-minded, so that they may be able to make compulsory though small savings by means of insurance premiums. It is likely that the recent insurance legislation will help to secure this object by putting the insurance companies on a sound basis and thereby making insurance more popular. Public opinion, however, will have to be trained if this method has to become effective. The point does not need much stressing that there is at present a great need for the encouragement of some institutions to tap savings made on a small scale. These savings will provide a good portion of the investable funds in India.

Moreover, in order to make these savings regularly available for the industrial development of the country a proper guidance to the investor and a more thorough safeguarding of his interests will be necessary. At the present time the investor is left to the mercy of advice given by the Stock Exchange operators, the advice of friends connected with industry, and his own untrained speculation. There are as yet no well-established investment houses or unit trust organisations in our country on whose services the investor can depend. If such institutions come into existence and stick to recognised

[1] cf. Dr. A. I. Qureshi, State Banks for India, 1939, pp. 182-183.

standards of fair-deal and honesty, they will do good business for themselves and will also help the industrial development of India. Incidentally, this will also remove the stigma of shyness from Indian capital.

7. *Foreign Capital*

The foreign capital[1] invested in India is anything between £300 and £450 millions; we have no reliable figures and all we can do is to make an intelligent guess. Two things are worth notice in this connection. The foreign investment in India is mostly British capital. Secondly, the foreign-capital has preferred the long-period investment in India, in spite of the fact that, on the whole, in our country short-term rates of interest are above the long-term rates. The foreigner probably has been discouraged from the short-period market partly on account of the uncertainties and risk of agricultural finance and partly because our bill-market and the market for short-period funds are still highly undeveloped and the foreigner finds it impossible to keep his fingers on the pulse of the market.

There has been much misunderstanding and much sentimental talk about the function and status of foreign investment in India. Without going into complicated details it may here be stated that the only two conditions under which foreign capital is undesirable are: (1) when we have to pay higher rates for it than for capital borrowed in our own country, and (2) when foreign capital necessarily involves undue interference with our economic and political system. It is wrong to encourage foreign capital investment in those projects in our country which attract Indian capital at reasonable rates. We cannot allow Indian savings to be forced into idle-

[1] See *India Builds her War Economy*—by P. C. Jain, 1943, pp. 139-40 and 155-57. (Published by Kitab Mahal, Allahabad).

ness on account of foreign capital investment, but there is no reason why foreign capital should not be used to develop those schemes which do not commend themselves to Indian capital.

The problem of separating foreign capital investment from political and economic interference though difficult is not impossible. Foreigners who invest their capital in any country cannot be indifferent to the conditions under which their funds are being utilised; for all they know, they may have to forego their savings entirely; hence they naturally desire guarantees or some hand in the direction and administration of business. On the other hand, the borrowing country cannot allow undue interference with its industrial and economic policy. The best result can probably be secured by reconciling these two apparently conflicting interests. Some definite methods, the choice in each case depending on relevant considerations, can be suggested to secure this end. One suggestion is that it should be made compulsory that in India only rupee companies can operate. It is argued that this will give an equal chance to Indians to invest and later on to buy up the non-Indian interests in the open market; thus, with some safeguards, control will be retained in Indian hands.[1] In some cases this is a splendid suggestion but its wholesale adoption will surely discourage foreign investment in India. The real thing in attracting foreign capital is the extent to which the foreign investor feels a sense of security and it can hardly be denied that such a provision will, to some extent, undermine his confidence and hence will discourage investment. Under an alternative method, foreign interference can be avoid-

[1] cf. Prof. H. R. Soni, Indian Industry and its Problems, Volume I, 1932, page 229.

ed if the Government of India guarantees a minimum rate of return on foreign capital. This will allay the fears of the foreign investor and will thereby reduce the need for his interference. This method, however, is not very successful partly because it might impose an undue strain and uncertainty on government finances and partly because the guaranteed rate of interest may have to be fixed at a higher level than conditions in our country would justify. Moreover, much equity capital without any type of interference is often necessary for doing spade work and it is expected to make up early losses, if any, by higher profits in subsequent years. This function cannot be assigned to guaranteed capital. The method of guarantee was followed in the case of Indian railways, but in that case the rate of interest was fixed too high and even foreign interference was not prevented because this was not at all the aim of the guarantee system. It is possible to devise a guarantee system which will prevent foreign interference, but under the present circumstances this does not appear to be a good method. The third method is to allow full freedom for the investment of foreign capital in our country but to control the possible evil effects by separate devices. The possible evils of foreign capital investment can be that the accompanying interference may try to annihilate indigenous concerns by cut-throat competition, it may leave undeveloped those industries which are likely to compete with the foreigner's home industries, due share of work may not be given to Indian labour, unduly high return on investment may be earned by misusing the managing agency rights. It is not difficult to control these possible evil effects by separate legislative action in each case as it arises.

CHAPTER X

INDUSTRIAL DISPUTES

By DR. BOOL CHAND, M.A., PH.D. (LONDON)
Professor of Politics, Benares Hindu University.

Disputes between labour and capital are a characteristic feature of every developing industrial system. In a capitalist state, these disputes are capable of amicable settlement in the period of expansion of profits but prove extremely troublesome whenever there sets in the period of contraction.

Isolated disputes took place in India as early as the eighties of the last century; but it was not until 1918 that they became a serious feature of the Indian Industrial system. "There were some important strikes in the cold weather of 1918-19; they were more numerous in the following winter and in winter of 1920-21 they became almost general in organised industry."[1] From 1921, when the Government of Bombay established a Labour Office and the Government of India took measures to compile records of disputes, accurate data on industrial disputes are available and reveal the following statistics:—[2]

[1] Report of Royal Commission on Labour in India, 1931, p. 333.

[2] B. Shiva Rao, Industrial Worker in India, 1939, p. 199.

Year	Number of Disputes	Workers Involved (in thousands)	Working days lost (in millions)
1921	396	600	7.0
1922	278	435	4.0
1923	213	301	5.1
1924	133	312	8.7
1925	134	270	12.6
1926	128	187	1.1
1927	129	131	2.0
1928	203	507	31.6
1929	141	531	12.2
1930	148	196	2.3
1931	166	203	2.4
1932	118	128	1.9
1933	146	165	2.2
1934	159	221	4.8
1935	145	114	1.0
1936	157	169	2.4
1937	379	648	8.9
1938	399	401	9.2
1939	406	409	4.9
1940	322	452	7.6
1941	359	291	3.3
1942[1]	654	820	5.3
1943[2]	..	..	..

The recrudescence of industrial unrest in 1937 may perhaps be explained by the advent in that year of popular Governments in the Provinces, which had the undoubted effect of stimulating the workers. It is, however, noteworthy that the chief centre of unrest was Bengal, where over six million working days were lost because of a prolonged strike of the jute mill workers;

[1] Provisional.

[2] Complete figures are not yet available but in the first eight months of 1943 there were 521 disputes involving nearly 3 lakh workers and 11½ working days were lost.

have been influenced by persons with nationalist, communist, or commercial ends to serve, there has rarely been a strike of any importance which has not been due, entirely or largely, to economic causes."[1]

Industrial workers on strike in India, however, present a rather dishevelled sort of spectacle. They are seldom able to state their demands in a really definite form or with a really collective voice. That is an inherent weakness in the situation and has often led to an unnecessary prolongation of the strike.

Although labour union movement began in India in 1918, when as many as at least four important unions were formed—the Madras Labour Union of the workers of the Buckingham and Carnatic Mills, the Clerks' Union and the Postmen's Union in Bombay, the Seamen's Union in Calcutta—yet the organisation of labour is still in its infancy. The exact number and membership of trade unions in India are rather difficult to ascertain, for membership is still often not strictly defined and many members are retained on the books although they may have long ceased to pay any subscription. In 1925, the total number of unions was reported to be 175, including 75 organisations of Government and semi-Government servants; in 1929, 51 unions claiming 190,436 members were affiliated to the All-India Trade Union Congress; and in 1937, 63 unions with a membership of 151,336 workers were affiliated to the National Trade Union Federation, which was formed as the consequence of a split at the Nagpur meeting of the Trade Union Congress in 1921. A number of unions were still affiliated to the All-India Trade Union Congress in 1937, and there were also unions which were not affiliated to either of these national federations. Altogether, "an estimate of 350,000 as the total member-

[1] Labour Commission Report, p. 335.

ship would probably not be wide of the mark."[1] But this estimate compares very unfavourably with the figures of the industrially employed population in India[2] and shows that 'only a few unions have hitherto succeeded in organising more than a mere minority of the workers.'

The reasons for this situation were carefully examined by the Labour Commission, which felt that the main obstacles to trade union development must be sought for in the nature of Indian labour, its migratory character, the poverty of the average worker, and the lack of energy or leisure for activity outside the factory. "Trade unionism", said the Commission, "to be fully effective, demands two things: a democratic spirit and education. The democratic spirit has still to be developed in the Indian worker, and the lack of education is the most serious obstacle of all."[3] We would add to these causes the general apathy, even opposition, of employers to the development of the trade union movement. The employer in India does not realise that even if trade unions are primarily meant to safeguard the interests of the worker, they can be of very great service to him also.

Government itself followed a rather hesitant and half-hearted policy towards the union of its employees. Before 1920, when the Central and Local Governments definitely prohibited the submitting of collective memorials and petitions, there was no possibility at all for the organisation (of Government employees; but even after

[1] Shiva Rao: *ibid*, p. 149.

[2] The estimate of both of the Census of 1931 and the Indian Franchise Committee as to the total number of workers in organised industry was 5 millions in 1931. See Census Report, 1931, p. 285, and Indian Franchise Committee Report, p. 91.

[3] Labour Commission Report, p. 321.

1920, when the Government granted the right of organisation to its employees, it granted that right subject to great limitations; and although the Trade Union Act was passed in 1926, both the Government of India and the Provincial Governments advised the unions of their employees not to apply for registration—on the plea manifestly that there would be difficulty in reconciling the privileges which their employees received as members of registered unions with their obligations under the Government Servants' Conduct Rules.

Private employers not unnaturally took their cue from the Government, and they also refused to recognise unions without their acceptance of conditions similar to those laid down by Government. In justification of their refusal they made all sorts of excuses before the Labour Commission, that the unions embraced only a minority of the class of workers concerned, that there were other unions already in existence for that industry, and that the executive body of a particular union included 'outsiders'; but to the Commission neither the minority character of a union nor the prior existence of another union seemed good reasons for refusing recognition, and as for the inclusion of outsiders in the executive body, while the Commission insisted on the need for trade union leaders being drawn from the ranks of labour, it held that some outside leadership was at present quite inevitable.

The real reason for the deplorable attitude of the employers is to be discovered in the misconception prevalent amongst them regarding the implications of recognition. The employer usually thinks that by recognising a union he would really be recognising the right of that union to speak on behalf of all his workmen, and, therefore, fears that recognition would simply help to make strikes easy and frequent. What he fails to see is that even in the absence of trade unions, workers can

always manage to form themselves into strike committees and other make-shift organisations, and that in the absence of genuine and responsible leadership, clever demagogues manage to capture mass imagination and foment trouble to gain personal and political ends; while the existence of a stable trade union might secure definite advantages. By means of propaganda and insistence upon the payment of union fees by the workers, a labour union does help to eradicate the migratory character of Indian labour and generally to contribute to its increased efficiency—factors, which are bound ultimately to redound to the benefit of the employer. Again, an extensive and healthy labour organisation is bound to create possibilities for collective bargaining, in the sense of negotiation between organisations of employers and organisations of workers, and thus largely eliminate fear of isolated and, therefore, frequent disputes and strikes. As the Cawnpore Labour Enquiry Committee recently pointed out in its report, it is only where trade unionism has been discouraged by employers that more extreme principles have found congenial soil. "A strong union is invaluable asset in several ways and is an insurance against unauthorised, irregular, and lightning strikes."[1]

The Bombay Industrial Disputes Act of 1938, which is discussed in detail later on in this Chapter, introduced valuable provisions for the compulsory recognition of trade unions by the employers. Now it is proposed to take action on an all-India basis. A Bill was introduced in the Central Assembly in November 1943 making it compulsory for employers to recognise trade unions provided that (1) all its members are workmen employed in one and the same industry, (2) it

[1] Cawnpore Labour Enquiry Committee, 1938, Report, p. 71.

has been a registered trade union for at least one year, (3) its rules do not provide for the exclusion of members on communal or religious grounds, and (4) it is a representative union in the sense that certain conditions to be prescribed later should be satisfied by it so that it may be deemed to be representative. It is proposed to set up a Board of Recognition in each province consisting of three members who will recommend the granting or withdrawl of recognition in respect of any trade union. Recognition will be withdrawn if a member has taken part in an illegal strike or if the trade union has ceased to be representative. These are rather severe conditions,[1] but if the Bill is passed into law it is bound to improve industrial relations in our country.

Collective Bargaining

A word may be said about the institution of collective bargaining which, in Western countries, has been found to be one of the most effective preventives of industrial disputes. Collective bargaining supposes that the organisations of employers and organisations of workers negotiate with each other on a collective basis and conclude agreements, which are effective for a certain specified period of time and are 'legally enforceable.'[2] Such agreements tend to promote in-

[1] cf. The *Eastern Economist,* November 12, 1943, p. 905.

[2] That is how these agreements are described in 'Industrial Negotiations and Agreements' (pamphlet), published by the Trade Union Congress and the Labour Party. (London, 1922).

Actually the legal status of trade agreements, like that of other phases of unionism, is still rather open to doubt and difference of opinion. The ordinary trade agreement, where no specific persons are mentioned and where no given 'quota' of workers is guaranteed and where no 'consideration' has been handed over to bind the bargain, has been held by several courts not to be a real contract but merely a memorandum or statement of policy. But recently, a certain amount of legal sanction has been made indirectly

dustrial peace, for since the agreements are unaltered for a specified period of time, sudden and isolated disputes become impossible. If either party is discontented with the working of the agreement, it bides the time when it will lapse with as much patience as it can muster. Sometimes a joint agreement embodies a stipulation that in case of inability of the parties to agree upon the right interpretation or the just application of the terms of the agreement, an arbitrator shall be called in, to whose award both parties bind themselves to submit. In such a case, arbitration comes in as a supplement to collective bargaining.

The term for which agreements are to run and the expiration date offer some chance for negotiation. In a period of depressed business and wages, when recovery is soon to be anticipated, employers are eager to bind their workmen for a long interval; and in a business subject to seasonal fluctuations, employers are on the whole anxious to have the agreement expire at the close rather than at the beginning of the busy season. The preferences of the unions are naturally just the opposite. In general, fairness seems to dictate a short contract period; long terms make it difficult for unions to keep their members loyal and in good standing. Or there may be continuing agree-

available for collective agreements. Under the Unemployment Insurance Act, 1934, a worker may refuse to work in his own trade in another locality 'at a rate of wages lower than those generally observed in that district by agreement between associations of employers and employees, or failing such agreement those recognised by good employers.' By the Cotton Manufacturing Industries (Temporary Provisions) Act, 1934, a machinery was set up under which the terms of a collective bargain could be made terms of the contract of every employed person in that industry, to pay less became an offence punishable with fine.

ments, as in the railway, building and printing industries in Great Britain, where no definite term is stated but a certain period of notice is required for abrogation.

But successful collective bargaining presupposes a strong organisation of workers as of employers, for without such organisation a regular and orderly process of collective bargaining cannot, in fact, be established. The employer needs to be induced to acknowledge that a union has a right to be heard through its democratically elected officers as the representatives of the wishes of its members. That does not, of course, mean as the Indian employer unfortunately tends to imagine, that the entire conduct of the business is immediately surrendered to the union; but it does mean that the employer is ready and willing to consult with the representatives of the union respecting certain matters, to discuss these matters with them face to face, and to endeavour, if possible, after a process of give-and-take, higgling and compromise, to reach a working agreement upon them. Although such recognition has come to be regarded by the great majority of large employers in Great Britain and America as inevitable if not positively advantageous, the employers in India still fight shy of conceding it. That is why real collective bargaining has proved impossible of operation in this country.

Minimum Wage Legislation

An alternative to collective bargaining is the fixing of minimum wage by legislation. The principle of minimum wage has now been accepted as being reasonable, fair, and necessary in almost all the advanced industrial countries; it consists in guaranteeing to the worker at least a bare 'living' wage.

Although there has been no proposal so far in India to have a general provision of this kind for the whole

country, proposals to this effect have from time to time been mooted in various Provinces and localities. In the Bombay Presidency, for instance, there has long been a proposal to legislate for fixing minimum wages. Recently the Cawnpore Labour Enquiry Committee has actually recommended the fixing of a minimum wage of Rs. 15 a month.

There are strong arguments in favour of fixing minimum wage rates After all, labour has a right to an adequate share in the national dividend; and anyhow, it is desirable in the interest of industry itself that wage level should at least be sufficient to maintain the workers in efficient existence. But it must be admitted that there are serious difficulties in the way of fixing the standard of minimum wages. Firstly, industry can in the long run bear only those wages that lead to an increase in the marginal productivity of labour; otherwise they become a dead-weight upon it, and Indian industry in particular can hardly afford to carry this weight. Secondly, there arise great complications in attempting to fix the minimum wage with reference to the family needs of the worker. By the test of a living wage perhaps the minimum of Rs. 15 recommended by the Cawnpore Labour Enquiry Committee is hopelessly low; it hardly provides two annas per head per day for rent, food, clothes, education, and the rest of it for a family of four—a worker, his wife, and two children. And then, different workers have different levels of efficiency. A fixed minimum induces the employer to employ the more efficient workers and to dismiss the less efficient, thus causing unemployment.

These are serious difficulties, although not insurmountable. The successful fixing of minimum wage levels at any time is possible only if accurate information is available about industrial profits and cost of living. At the present time, Bombay regularly perpares reliable

figures about the cost of living; but so far as we are aware, no information is available anywhere about industrial profits. There is a clear case for compelling industrialists to submit, in confidence, figures of profits and marginal productivity of labour to Trade Boards which should be constituted in all Provinces. The experience of British Trade Board, constituted under the Acts of 1909 and 1918, is really instructive and should be very helpful in guiding these Trade Boards in their work of fixing the minimum wage levels from time to time.

And even the fixing of minimum wage levels cannot by itself be enough. These rates need to be perpetually adjusted to the changing cost of living in order to save labour a possible hardship. Trade activity is always subject to fluctuations and commodity prices change from time to time. If, when the prices are high, minimum wage rate remains the same, the worker would naturally be the worse off for it; and this is bound to lead to labour disputes. And when there has been some time lag between the movement of commodity prices and wage levels, the employers are not always willing to increase wages, even under pressure and even when the need to do so has been established on expert analysis.

This is our experience particularly after the recommendations of the Bombay Textile and the Cawnpore Labour Enquiry Committees last year. The Bombay Textile Labour Enquiry Committee—having been asked to examine the wages paid to workers in relation to hours, efficiency, and conditions of work, to inquire into their adequacy or inadequacy in relation to a living wage standard, and if found inadequate, to make recommendations, keeping in view whether the present conditions of industry would permit of an immediate increase—recommended an immediate increase in wages on a sliding scale, the increase being higher for lower wages and

vice versa, ranging from 3 annas in the rupee on a wage of Rs. 13/8/- to one anna in the rupee on a wage of Rs. 75. A similar increase in wages on a sliding scale was recommended by the Cawnpore Enquiry Committee. But the employers have not shown great willingness to make the suggested increase in either case; their argument is that if this increase is made, the wage bill of the textile mill workers will *permanently* increase by about one crore per annum for Bombay and three lacs per annum for Cawnpore.

Thus the problem of wage adjustment will always remain a difficult one, and unless it is sought to be solved on some automatic basis, must continue to cause bitterness and bad blood. A successful scheme of automatic adjustment must satisfy two conditions: it must be flexible, and it must operate justly both towards the employer and the employee. Several plans have from time to time been operated in order to secure automatic adjustment of wage levels. The plan whereby wages are periodically advanced or reduced according to the showing of some official index numbers of the cost of living[1] is not a scientific or satisfactory one; the criterion of

[1] Some general features of the working of these plans in English industries may be given in order to help the reader to grasp the point more vividly.

The sliding scale relating wages to the cost of living is operative in the case of building and engineering industries in England. The standard rate of wage, when the Ministry of Labour cost of living index is 165 (1914=100), is 1/8 sh. per hour. Wages are altered every January; and for every complete rise or fall of 6½ points in the index the hourly wages are increased or reduced by half-penny. In the English coal industry, wages are related to the changing prosperity of the industry. The coal-mining area is divided into 13 districts; and wages are made up of an agreed basic rate for each category of work, plus an agreed percentage addition determined by the proportion of the ascertained net proceeds of industry—of which the labourers share about 85 per cent.

adjustment should be *real* wages rather than mere counters. A sliding scale based upon the selling price of the final product[1] seems on the surface to have much to recommend it as a method of securing easy and prompt readjustments. It has been used in the iron and steel trades in Great Britain for over half a century and has been tried at different times in the coal industry there and in the United States. But it has lost favour, partly because there is perpetual difference regarding the basis of computation and partly because it sometimes seems to make the wage-earner the victim of mismanagement on the part of his employer. In abnormal periods it leads to rather demoralising fluctuations in wages, and in any case is adapted only to a relatively simple industry where other costs than that of labour are fairly steady. A plan combining the various elements—the cost of living and the state of the industry—has recently been proposed and adopted in certain industries, particularly in printing industry in England and America.

It is of interest to note that India is not wholly without some experience in this matter and would not, therefore, have any great difficulty in adopting such a proposal. During the (1914—18) war, wage rates were habitually increased by dearness allowances and bonuses, which at one time rose as high as 70 to 80 per cent of the original wage level. That was, however, it needs to be pointed out, rather a haphazard and arbitrary device, smacking even of dishonesty and selfishness on the part of the employers, for they looked upon it as an easy method of pulling down wages later on.

Prevention and Settlement of Industrial Disputes

The various devices we have so far explained aim at the wholesale elimination of the possibilities of indus-

[1] *Ibid.*

trial disputes; but as we said at the very start, in a class-conscious capitalist society conflict between labour and capital is ultimately more or less inevitable. We ought, therefore, to analyse the various methods that may be employed for the prevention of disputes when they are in sight of settlement if they cannot be prevented.

The methods usually employed for the prevention of disputes are known technically as mediation and conciliation or arbitration. Mediation consists in the bringing together of the parties through a mediator. Usually the mediator proceeds by securing from each party a confidential report about its minimum demands or concessions, and with this information in hand draws up a provisional agreement with each party and thus paves the way for a final formula acceptable to both. Mediation, of course, has its limitations. Where employers are not prepared to deal with their workers as a body, or where the parties to the dispute are already accustomed to joint consultation, the scope for mediation is naturally somewhat limited. But in usual circumstances, mediation has proved a very successful method of preventing industrial disputes. In Indian conditions, where personal influence plays such an important rôle in public affairs, the future for mediation is, we feel, particularly great, if only the mediator could be rightly selected for his sense of responsibility, honesty, and reputation for impartiality.

When mediation fails, resort is had to conciliation or arbitration. "Conciliation and arbitration procedure has been described as a kind of a 'flying ambulance squad', which appears whenever a collision occurs between the interests of workers and employers which threatens to disturb their harmonious productive activity."[1] It may

[1] International Labour Office: Conciliation and Arbitration in Industrial Disputes, (Geneva, 1933), p. 8.

be voluntary or compulsory, in so far as it provides for giving to parties in an industrial dispute voluntary or compulsory impartial help to formulate collective agreements or in this way adjust their grievances, with or without state aid. Great Britain was the first country in which voluntary conciliation was extensively developed. Canada and the United States adopted the same principle, although in Australia and New Zealand emphasis is laid upon compulsory arbitration.

Our own view supports voluntary rather than the enforcement of compulsory arbitration. Firstly, unless a settlement is to the satisfaction of both parties, it cannot be respected in its spirit for a long time. Experience tells us that in such a case quite insignificant events tend to raise difficulties and the first opportunity is taken to violate the agreement. The workers, in the event of their dissatisfaction, refuse to put in their best effort while at work, and a tense atmosphere prevails in the whole factory. Secondly, compulsory arbitration makes the entire productive system rather tight and rigid; costs of production may often be raised and the competitive power of the industry, especially in the foreign market, greatly undermined. And finally, compulsory arbitration violates the primary tenet of democracy—freedom of contract—which, whatever its worth in the present unequal society, cannot be denied to have a very real practical value. Compulsory arbitration is a suitable method of industrial settlement in a dictatorial state like Germany or Italy, but has no place in a free democracy at all. No wonder then that the experience of both Australia and New Zealand of the working of this method has been on the whole unhappy.

Indian Trade Disputes Act, 1929

In India, the procedure for the settlement of industrial disputes is regulated by the Trade Disputes Act of

1929, which was in the first instance passed only for five years but was then converted into a permanent Act. It provides for the setting up of an *ad hoc* Court of Enquiry or Board of Conciliation in the case of trouble. A Court of Enquiry is to consist of one or more independent persons appointed by the Local Government or the Governor-General, as the case may be. A Board of Conciliation may consist of an independent person, or an independent person acting as chairman with two or four other persons who may be independent or representatives, in equal numbers, of the parties at issue. The duties of the Court of Enquiry are confined to the investigation of the matters referred to them and to reporting to the authority which appointed them. Boards of Conciliation, on the other hand, are charged with the duty of attempting to effect a 'fair and amicable settlement,' and if no settlement is reached, then of reporting to the appointing authority. When the appointing authority has received the report of a Court or Board it must publish the report as soon as possible, with necessary safeguards as to confidential matters. There the statutory obligations of the public authorities come to an end, reliance being placed on public opinion to induce the parties to accept the recommendations that may be made in the report.

The questions (*a*) whether it should be made obligatory on the public authorities to refer disputes to arbitration, and (*b*) whether force of law be given to the findings of the tribunals appointed to deal with disputes, were examined and happily turned down by the Royal Commission on Labour in India. Yet the Commission did not fail to express its opinion that the authorities should make more and earlier use of their powers to appoint Courts of Enquiry and Boards of Conciliation. "There seems to be," said the Commission, "a tendency at present for Government to withhold their hand until a

dispute has attained a serious magnitude and constitutes a threat to public peace. There may be a case for the appointment of a tribunal, even if there is little danger of disturbance and no clamant demand for action on the part of the public."[1] The opinion of the Commission was related to the solid facts of Indian experience; for a reference to industrial disputes since 1921 affords abundant proof that the Indian worker is only too willing to accept negotiation and arbitration as a method of settlement. Between 1921 and 1928 there were 22 disputes in which, as a result of informal negotiation by the Provincial Government concerned or one of its officials, boards of conciliation or courts of enquiry were appointed, and in most of these the award was accepted by both sides. In some cases, indeed, the termination of the dispute followed almost immediately upon the appointment of such tribunal.

But it is a sad commentary on the want of public sense of the Indian Government as constituted under the old administration that the Government still remained rather indifferent to the utilisation of this machinery. More than 500 disputes occurred in India during the period 1929-1933, but only two Courts of Enquiry and two Boards of Conciliation were appointed by the Government; and between 1928 and 1936 although there were altogether eleven instances in which settlement was reached by conciliation or arbitration, only three of them related to cases where action was taken by the Provincial Governments under the Trade Disputes Act. And be it said to the credit of the new Congress Provincial Governments that within less than a year of their assumption of office they appointed in the case of at least fifteen disputes Committees of Enquiry and

[1] Labour Commission Report, p. 345.

Boards of Conciliation, most of them under the Trade Disputes Act; and the results of the appointment of these independent tribunals in the various Provinces have been literally remarkable. "The right of the workers to form unions has not only been recognised by these tribunals, but in many cases conceded by the employers without any other condition than that of registration under the Trade Union Act and previous notice of strikes. Wages have been increased, particularly for the textile workers, by proportions reaching up to a maximum of 25 per cent in some cases. Holidays with pay have been recommended and in some centres granted by the employers. Schemes of sickness insurance are being evolved in more than one province and will form the basis of legislation or voluntary agreement at several centres."[1]

This contrast reveals a very defective administration of the Trade Disputes Act by the old Governments. But the provisions of the Act also are not above criticism. The Act renders general strikes and lockouts illegal on the plea that such strike may 'compel the Government to take or abstain from taking any particular course of action.' In the case of Public Utility services, which are essential to the health, safety, and welfare of the community, fourteen days' notice is demanded before strike, thus placing workers in these trades at a disadvantage without any compensatory advantage as regards conditions of employment. And most of all, as the Royal Commission so effectively pointed out, the Act 'tries to copy the less valuable part of the machinery employed in Great Britain, while ignoring the most valuable part. There, less reliance is placed on *ad hoc* public enquiries of the kind contemplated in the Indian Trade Disputes Act than in the efforts of the conciliation officers and

[1] Shiva Rao; *ibid.*, p. 198.

others to bring the parties privately to agreement.' Nor does the Act set up a standing Industrial Court like the one that was set up in England by the British Industrial Court Act, 1926, which has done such remarkable conciliation work in that country.

These defects of the Trade Disputes Act have been partially removed by the Government of Bombay in their Trade Disputes Conciliation Act, 1934. This Act was made in the first instance applicable to the textile industry in Bombay City and Suburban District, but was made capable of extension by the Government to any industry or locality. It provides for the creation of a permanent Conciliation Board with the Commissioner of Labour as ex-officio Chief Conciliator, and for a Labour Officer 'to watch the interests of workmen with a view to promote harmonious relations between employers and workmen and to take steps to represent the grievances of workmen to employers for the purpose of obtaining their redress.' The arrangement is very satisfactory and complete; for while the duties of the Chief Conciliator are to bring about a settlement of differences or disputes between the employer and worker which have started or are about to start, the duty of the Labour Officer is to remove the grievance of the workers which are at the root of such disputes. Yet it may be mentioned that the appointment of Labour Officer has not met with anything like a warm reception at the hands of the workers or the trade union leaders. The trade union leaders are apprehensive that the appointment of Labour Officers by the Government would undermine the collective activities of the workers and the trade union movement as a whole.

Bombay Act, 1938

The Bombay Government passed an Industrial Disputes Act in 1938. A permanent Industrial Court has

been set up under this Act. The Labour Commissioner is the ex-officio Chief Conciliator. A provision has been made for conciliation and arbitration of disputes. The acceptance of awards has not been made compulsory but all the disputes have to be submitted for peaceful settlement before lock-outs and strikes can be declared. The trade unions have been divided into 'representative,' 'registered,' and 'qualified'; detailed provisions are made to safeguard labour interests. A trade union will be registered if it has a membership of 5 per cent of the total number of workers in a locality and is recognised by the employers or if it has 25 per cent membership independently of the employers' recognition. A union with only 5 per cent membership but not recognised by the employers becomes a 'qualified' union. Payment of a small monthly subscription is made compulsory for membership. Not more than one union will represent any one locality. If a locality has no registered union, all the workers can select five members from amongst themselves ot represent their case.

Each employer must submit, for the approval of the Labour Commissioner, standing orders relating to discipline and working of the establishment. Some formalities are made necessary before a change can be effected. Three distinct steps are provided before a strike or lock-out can be declared. A notice has first to be given. Negotiations regarding the proposed change will then take place, and if an agreement is reached it will be registered. If no settlement is reached, the contending party has to submit a full statement of its case to specified officials. An industrial dispute is then recorded in a register. Effort at conciliation has now to be made. The Chief Conciliator submits a full report to the Government. In case of failure, as a final step, the Government can refer the matter to a Board of Conciliation. The Government lays down the time-limit for all

these stages. Strikes and lock-outs are illegal during the conciliation proceedings.

The Bombay Act, in addition to providing for a permanent Industrial Court, has three important features. In the first place, any one registered union may be declared representative for the locality. Moreover, the Government has been given authority to extend to the whole industry settlements agreed to by a majority. These provisions very successfully overcome two chronic shortcomings of any developing industrial system, that is, the disinclination of employers to recognise trade unions and the capacity of a recalcitrant minority to prevent the whole industry from enjoying better conditions of work. The Act also encourages registration which has not yet been very popular with Indian trade unions. Secondly, the violation of vague and unwritten promises often became the subject of dispute in India. Nobody knew who was right till it was too late. The Bombay Act insists on written and registered agreements and standing orders. Thereby it avoids the possibility of much unnecessary misunderstanding. Finally, compulsory arbitration is not enforced though all the advantages of peaceful settlement have been secured.

The Bombay Act was vigorously criticised by labour leaders. Their main argument appears to be that strikes are effective only if they are sudden; the government has deprived labour of an effective instrument without any compensatory advantage by providing for delay and notice to employers. This, they argue, is unjust. The labour leaders forget two things. It is true that the strike weapon will lose some of its effectiveness but the labourers will not suffer because ample provision has been made in the Act to safeguard their interests. We should consider the Act as a whole and not only some provisions of it. Moreover, the labourers have been abusing the 'suddenness of the strike' not so much to

cow down the employer as to coerce public opinion by inflicting a direct blow on the community. This could not be allowed. Public opinion will now be formed on the basis of impartial reports of a conciliation officer. The workers will not suffer at all.

Action Under D. I. R.

It has long been proposed that Industrial Disputes Legislation may be passed on an all-India basis on the Bombay model. This has not yet been done, but the Government of India took action under the Defence of India Rules and Rule 81A which was made on January 21st 1942 provides that, if in the opinion of the central government it is necessary for securing the defence of British India, public safety, maintenance of public order, or the efficient prosecution of war, or for maintaining supplies and services essential to the life of the community, the central government may by a general or special order prohibit strikes or lock-outs in connection with any trade dispute and may refer any trade dispute for conciliation or adjudication and may enforce the decision of the adjudicating authority.

Under the above Rule the Department of Labour passed an Order dated August 21, 1942 which made 14 days' notice essential before a lock-out or strike is declared. And when a trade dispute has been referred to a Court of Enquiry or a Board of Conciliation, under the Trade Disputes Act 1929 or under Rule 81A of the D. I. R., no person shall remain on strike and no employer shall declare a lock-out during the period from the making of the reference until the expiry of two months after the conclusion of the proceeding upon such reference.

Rule 81A is very wide and if strictly enforced would take away all liberty from the labourers to declare a strike and from the employers to declare a lock-

out and the principle underlying the Rule is compulsory adjudication and compulsory acceptance of the decision of the judges. In this respect this Rule goes much beyond the Bombay Act of 1938. But such stringent regulations are necessary in the interests of war effort. But in the Order of August 21, 1942 mentioned above the Government of India have accepted the right of the labourers to strike and of the employer to declare a lock-out provided the time limits are observed. This brings the Rule parallel to the Bombay Act (1938) and allows for sufficient time in which common sense may be expected to prevail. Rule 81A has proved effective and successful during the war emergency but a more comprehensive and thorough-going legislation is needed to place industrial relations on a satisfactory basis in peace time.

Conclusion

In the first place, therefore, it is essential that each Province in our country sets up a permanent Industrial Court, such as Bombay has done. It is only such an institution that can act with quickness and have confidence of the workers and the employers alike. Secondly, each industry should have its own conciliation machinery. A detailed machinery of this type has worked successfully in the British shipbuilding, iron and steel industries. In India the Ahmedabad textile industry has evolved a successful system. All this points to the desirability of developing it with a view to its general application for the settlement of disputes. Its working 'would go far to strengthen the better elements and to increase that sense of responsibility in trade unions which so many employers are anxious to develop.'

And lastly, we would insist again upon the great importance and necessity for a strong trade union movement. In the strength of labour organisation lies, we

believe, the strength of Indian industrialism. This is just what the Indian employer needs to realise. No country can secure a permanent advance for her industries at the expense of her labour, and there is abundant evidence to show that a generous policy in respect of labour is usually in the long run a wise policy in respect of industry. Willingness on the part of the employers to deal upon a business basis with representatives of the workers may lead to the ascendency in labour organisations of more stable and more responsible elements, and thus bring about a spirit of confidence and goodwill between the employers and the workers.

At the same time, employers cannot afford to forget that society as a whole is rather favourable than opposed to the claims of labour. Producer organisations by themselves can seldom be depended upon always to consult the best interests of society in general, so that the maintenance of rivalry between the opposing parties in production is looked upon as a guarantee for service. Further, in the passage of labour legislation the public is almost naturally the chief ally of labour. Wherever labour has organised itself as an effective political party, it always instinctively emphasises this aspect in its programme of education, health, safety, the prevention of poverty and dependence, and the equality of opportunity —all of which enlist popular sympathy, for they are more and more acknowledged to be the legitimate objects of the state. This means that as soon as the economic dispute between employer and worker develops into a political conflict between capital and labour, capital always appears at a disadvantage. It is in the interests of the employers themselves to prevent—at any rate delay—such a development, and this can only be done if a generous attitude is taken to all the legitimate demands of labourers.

CHAPTER XI

INDUSTRIAL EFFICIENCY AND LABOUR WELFARE

By DR. ANWAR IQBAL QURESHI, M.A., M.SC. (ECON.) LONDON, PH.D.
Professor of Economics at the Osmania University, Hyderabad—Deccan

During recent years the question of industrial efficiency and labour welfare has been attracting increasing attention. This is as it should be; for India is rapidly mobilising its industrial and mineral resources and it will not be long before it ranks as one of the leading countries of the world. Even today India is one of the eight leading countries of the world and thus is entitled to a seat in the Council of the International Labour Office.

It is very unfortunate that in the past this problem has not received the attention which its important nature deserved. As a consequence the industrialisation of the country has not proved an unmixed blessing. It is a great tragedy that on this account the science of economics has been blamed for its indifference to or even positive neglect of the labour welfare problems. Ruskin styled it as "the bastard child of darkness." Carlyle condemned it in the strongest possible words. At the close of the Industrial Revolution in the nineteenth century, the appalling misery of the workers, the unbelievably long hours of work, the unimaginable conditions of work, the insanitary and almost filthy condition of the work-places and the appalling poverty and distress of the workers were all neglected by a large number of economists

of that period. As a matter of fact, some went so far as to defend the system of the freedom of individual liberty and asserted that the workers were free to make contract and no one was responsible for their distress.

This general antipathy of the economists brought them in the bad books of the working classes, and led to the neglect of these problems by the economists. With the changed times, it is very satisfactory to note that this outlook has completely altered and increasing attention is being devoted to the study of labour problems. In a country like India where a preponderating majority of workers is illiterate and a large majority of employers has the same outlook and mentality as the European employers of the middle nineteenth century, it is highly desirable in the national interest, no, I should say, almost essential, that adequate attention should be devoted to the study of labour problems.

Why an Indian Labourer is Inefficient

There has been a good deal of vague talk about the inefficiency of the Indian labourer, and the blame has always been laid on him. He is inefficient; the output of his work is considerably less than that of labourers in other countries; he is incapable of sustained work; he frequently absents himself from his work, and even while he is working he wastes a good deal of time in either idleness or in loitering. Discipline is unknown to him and he is hard to manage. He has very bad ways of living and any increase in his wages is likely to be spent more in absenting himself from work than in increasing his standard of living. If all these charges are correct then it seems almost impossible for this country to become an efficient industrial country to any considerable extent. Any schemes of labour improvement, or the paying of better wages are likely to be of little use. It is highly regrettable that very little effort is being

made to find out why an Indian labourer is guilty of all these charges; in other words, if he is guilty of all the above charges, we must find out the motives which impelled him to commit all these offences. If a criminal is really to be improved, it is necessary that one must go behind the scene of the crime. When we look behind the scene we find a very gloomy picture indeed. We find that a worker lives in an overcrowded house, his diet is far from satisfactory, his dress is less than adequate, and he is indebted beyond his means. A stage is very soon reached in his life when he no longer works for himself but for his creditors, and life soon becomes such a monotony that he ceases to take any interest and even the worst is good enough for him. "It is monotony of life much more than monotony of work that is to be dreaded. Monotony of work is an evil of first order only when it involves monotony of life." If a worker has no interest in life, it is quite clear that he is incapable of any improvement. The consequences of such a state of affairs are devastating not only to the man himself but to the society and the country as a whole. If the millions of workers live in such dejected poverty and have no interest in life it is clear beyond any doubt that it is almost impossible to increase our national income. In order to understand how this state of affairs has been brought about, we have to study the environments in which these labourers pass their time.

Man has been very aptly described as the creature of his environments. This is particularly true especially of an Indian labourer because he has a very rigid and circumscribed environment in which he lives and moves. The housing condition in most industrial areas is terrible, the congestion unbelievable and the lack of fresh air and light very striking. "Limitation of space and high land values are responsible for much of the congestion in the large cities, but these factors have had less

influence in the smaller towns and centres. Probably the most important common feature has been the lack of control over the selection of sites intended for industrial development and the consequent over-crowding in the heart of the towns already suffering from shortage of houses." This has resulted in very heavy rents. Sometimes the house rent alone absorbs 15 to 25% of the total income of the worker. When it is remembered that for the lower class of the workers the food alone costs 55 to 65% of his income, it can be well imagined that if he has to pay 25% for rent and 60% for food, he is left with 15% for all his additional needs and has also to pay off a heavy burden of debt.

For a labourer coming from a village where he seldom pays any rent this seems more onerous to him than any other item of his expenditure. In his desperate need for economy he invites others to share his small room with them. This has resulted in very serious overcrowding. An enquiry was made in Bombay in 1931 and it was found that in 1929, 89% of the workers lived in single rooms in Bombay, 73% in Ahmedabad in 1926, 72% in Cawnpore and 60% in Nagpur in 1930. In a room of 10 by 9 ft., on an average, 4.9 persons were living and in some areas the number was as high as 12 persons per room. The contrast becomes more vivid if we compare the living conditions of Indian workers with English workers. In London 6% of the total working population lives in one room with an average of 1.92 persons in such rooms. Such an overcrowding has led to a shocking state of affairs. The working houses in India have been very aptly described by Mr. Hirst as 'warehouses.' The sanitary conditions of the majority of the houses are far from satisfactory. Working class houses are mostly owned by private landlords who have no other motive but to extort the maximum amount of rent with the

minimum amount of outlay. An enquiry was made in Cawnpore and it was discovered that 82.5 per cent of the houses had no windows.

Effects of Overcrowding

One of the results of insanitary and overcrowded housing conditions is the high rate of infant mortality, the relation of which to the amount of housing accommodation in tenements in Bombay City is shown in the table below. The rate of infant mortality, in the case of families occupying one room, was more than double that of families occupying two rooms or more. Although the presence of malaria and the practice of soothing babies by the administration of opium are also partly responsible, the main cause of the high rate of infant mortality is overcrowding.

INFANT MORTALITY IN RELATION TO THE NUMBER OF ROOMS OCCUPIED, BOMBAY CITY, 1926-1927

Number of Rooms	*Births*		*Death of Infants*		*Infant Mortality per 1,000 Births Registered*	
	Number	*Percentage*	*Number*	*Percentage*	1927	1926
1 Room and under ..	11,615	53.6	5,688	83.0	490	577
2 Rooms ..	1,736	8.0	352	5.1	203	254
3 Rooms ..	392	1.8	87	1.3	222	215
4 Or more rooms ..	174	0.8	34	0.5	195	163
Hospitals ..	7,764	35.8	680	9.9	88	107
Homeless and not recorded	4	..	16	0.2	..	..
TOTAL ..	21,685	100.0	6,857	100.0	316	389

The absence of adequate housing accommodation is also one of the factors which predispose workers to leave their wives and children in the villages when they migrate to industrial centres. The result of this practice is seen in the great disparity between the numbers of sexes in large towns. The number of women per 1,000 men in 1931 was 489 in Calcutta, 554 in Bombay, 696 in Cawnpore and 853 in Ahmedabad.[1]

The above table hardly requires any comment. It strikingly demonstrates the relation between human life and the human environment as the child mortality is the best index of a nation's health since the child is more sensitive to its environments.

Whatever may have been the justification for such a state of living in the past, it should not be tolerated in the future, and the foremost task of any society or state should be to devote more attention in improving the environment of the labourers and in making them better men. If in due course of time this essential is achieved, he is bound to become a more efficient worker. England which in the last half of the nineteenth century was an individualistic country to the very core and where the doctrine of *Laissez Faire* was supreme, was the first country to realize the importance of improving the condition of the working classes, and it was with this end in view that free compulsory education began to be provided. We find in India today that every scheme of betterment is retarded owing to the fact that the masses are absolutely illiterate. A child born in a dark dingy house, brought up by an illiterate mother and growing up without any beneficial external influences can never become a satisfactory worker and a respectable citizen.

A repeated charge has been laid against the Indian

[1] Industrial Labour in India. International Labour Office, Ceneva, pages 308-309.

labourers that they do not interest themselves in industrial life. The nature of their stay is temporary and they are always haunted by the memories of village life and are always too eager to go back to their villages at the earliest possible opportunity. I believe a good deal of harm has been done to the country by accepting this type of statement without deeper analysis. I think an apology is hardly needed to quote one such statement, as I intend to criticise it. Explaining the cause of the villager's anxiety to return to the village Sir Frank Noyce remarks: "The worker will often find himself amongst strangers, whose language, culture and customs are all alien to him. His health will often suffer from changes of climate and diet. His sanitary habits may be fraught with peril in his new surroundings, yet cannot easily be altered. There are also other dangers from sickness and disease and from the new and insidious temptations of city life. His working hours are transformed; continuous labour under rigid discipline takes the place of spasmodic work with long hours of leisure. Lastly, the constant turnover of the labour force which, for these causes and others peculiar to Indian labour, occurs in most industries, prevents the establishment of personal and friendly relations with his employer. The driving force in industrial migration comes from the village end of the channel. The city, as such, has no attraction for villagers, and a few of them would remain in industry if they could secure sufficient food and clothing in the village. *They are pushed, not pulled to the city.*"[1]

Some of the facts stated above are true but they are not the causes. An Indian villager is no exception to the general human rule of love for his native land but such love has been vastly exaggerated. The reason

[1] Social Service in India, pages, 285 to 286. His Majesty's Stationery Office, London.

for his unrest and longing for the village is that he finds himself in a strange and filthy environment with all the miseries and discomforts of industrial life without any of its amenities. Why is a European or an American worker always pulled to the city and not pushed to it? Why is there always a general complaint in the West of an exodus from the country to the cities in spite of the fact that country life is much more appreciated by the people in Europe than in India? The only satisfactory explanation is that in the West a worker is pulled to the city by its attractions which are almost lacking in India. One of these attractions is good houses.

"*The Adverse Effects of Bad Housing and Sanitation*—'Good houses mean the possibility of home life, happiness and health; bad houses spell squalor, drink, disease, immorality, crime, and in the end demand hospitals, prisons and asylums in which we seek to hide away the human derelicts of society that are largely the results of society's own neglect.' Insufficient and bad housing is also one of the factors responsible for industrial unrest. All these evils are present in varying degrees in Bombay. One of the greatest evils is the infant mortality in the slum areas. The rate of mortality varies inversely with the number of rooms in the dwelling-place. The highest rate reached in the worst localities is 298 per 1,000 registered births as against the average rate of 200 to 250 for the general population. Lastly, the appalling conditions of *Chawl* life and the absence of privacy have also a deterrent effect on those who wish to bring their families with them to the towns and have thus, in general, a very unsettling effect on the stability and efficiency of labour."[1]

The fact that there is a very intimate relation between

[1] Indian Economics, Vol., II by Jathar and Beri, page 104.

good houses and stability in the working classes has been very well realised by progressive employers in India. To mention a few cases, model houses have been built by private employers in Nagpur, Madras, Cawnpore, Jamshedpur and Ahmedabad. It has been found that the number of absentees is strikingly less in these establishments and the workers only go to their villages when their annual leave is due.

We have suggested above that one of the fundamental causes of the instability of labour conditions in India and the comparative inefficiency of the Indian labourer was due to the environment in which the labourer lived and worked. Not only are the sanitary conditions of living in most industrial quarters filthy and positively dangerous, but even in a number of factories the conditions conducive to work and health are lacking. Moreover, the Indian labourer is handicapped due to the climatic conditions of the country. Experiments that have been made show that during the hot weather the efficiency of the worker decreases by as much as twenty per cent. However, the bad conditions of environment do not explain the whole situation.

Long Hours of Work

There is an intimate connection between the hours of work and the efficiency of the worker. When industries began to be developed in India in the last century, the Government of India were imbued with the liberal traditions of *laissez faire* and the policy of non-intervention in private affairs. They adhered to the notion that the functions of good government were to maintain law and order and to interfere as little as possible. This led to the exploitation of labour. There was no intervention by the state and the employers were free to exploit the labourers as they liked with the result that the factory conditions in India were most appalling

and the labourers were led to work for 13 to 14 hours a day. It is interesting to note that the Manchester mill-owners who were otherwise staunch adherents of the policy of non-intervention by the state and were uncompromising advocates of the policy of *laissez faire*, in the case of India could not remain indifferent to the plight of the Indian labourers though they were not disturbed when similar conditions had prevailed in their country not long ago. Consequently it was on the pressure and intervention of the Secretary of State that the first Factory Commission was appointed and efforts began to be made in India to improve the conditions of work and later on to reduce the hours of work. The first Factory Act was passed in 1881. The factories in India are at present regulated by the Factory Act of 1934 and its amendments. The hours of work have been reduced to 54 per week for men in the perennial factories and 60 per week in the seasonal factories. Before the passing of the Factory Act of 1911 in a number of industries the labourers were made to work for 14 hours a day.

It is quite evident that when a labourer starts work in the morning and has a good night's rest he feels a certain amount of freshness and enjoys his work. Although it is said that all exertion is painful but certain amount of exertion has pleasant effects, for instance, the daily exercise for men of sedentary habits. But with the prolongation of work freshness disappears and the strain begins to be felt and with a further increase in output of energy it becomes positively painful. To illustrate our point we take a very simple and common example. A walk of one mile or two in the morning or afternoon is considered as a recreation by a healthy man. But if he is to go on increasing the length of his walk he will not enjoy it as he enjoyed the first few miles, and after a certain number of miles he will be compelled to rest. His energy was very high during

the first few miles and he could finish the distance of one mile in 15 minutes, but he cannot finish 8 miles in two hours. He requires more time for after every mile his energy begins to decrease. In technical language it is said that the marginal productivity of labour decreases with the prolongation of hours of work. Objections that have been made regarding the loitering nature of the Indian workers, their disinclination to work constantly, frequent absences from work, would be well understood in the light of the above explanation. The Indian Factory Commission of 1908 remarked that "while the Indian factory worker may work hard for a comparatively short period his natural inclination is to spread the work he has to do over a long period of time, working in a leisurely manner throughout and taking intervals of rest whenever he feels disinclined for further exertion." This self protective nature of the workers was adequately defended by another member. Dr. T. M. Nair in his minute of dissent explains "that this is a manifestation of the adaptive capacity which all human beings possess more or less, devised to reduce the intensity of the labour as a safeguard to his physical well-being." The truth of this assertion is well understood by the fact that with the reduction of the hours of work, improved sanitary conditions and other amenities provided to the workers there has been a progressive decrease in the loitering habit of the workers. For example, the loitering habit is conspicuously less in the Calcutta Jute mills where the labourers work short hours owing to the shift system. In the Engineering workshops there is also not much complaint of loitering as the hours of work in those mills seldom exceed 8 a day. This is not only the experience of India but of other countries as well. The same complaints were heard in the middle of the last century about the English workers which were excessively exaggerated by the employers.

For our purpose it will be best to illustrate our argument from the conditions of an Asiatic country and we give below a table showing:—

*HOURS OF WORK AND OUTPUT PER WORKER IN THE PRINCIPAL JAPANESE INDUSTRIES BETWEEN 1922 AND 1932

Year	*Weaving*		*Cotton spinning*		*Silk spinning*		*Coal mines*	
	Hours of work	*Production per head (100 yards)*	*Hours of work*	*Production per head (bales)*	*Hours of work*	*Production per head (kwan)*	*Hours of work*	*Production per head*
1922 ..	11	18	11	12	12	18	..	111
1923 ..	11	20	11	13	12	19	..	104
1924 ..	11	20	11	13	12	22	..	120
1925 ..	11	21	11	14	12	23	..	124
1926 ..	11	22	11	14	12	23	..	134
July 1926	10	..	10	..	11	..	..	..
1927 ..	10	25	10	15	11	24	..	140
1928 ..	10	31	10	16	11	24	..	142
1929 ..	10	35	10	17	11	24	..	150
1930 ..	10	39	10	18	11	26	..	153
July 1930	8½	..	8½	..	Sep. 10	..	Sep. 10	..
1931 ..	8½	49	8½	20	10	27	10	181
1932 ..	8½	50	8½	22	10	31	10	218

In the weaving industry we find that from 1922 while there has been a reduction of hours of work from 11 to 8½ hours there has been an increase in production from 18 to 50. Similarly in other industries as well there has been a startling increase in the efficiency of the worker due to the reduction of excessive hours of work.

*Social aspects of industrial development in Japan by Fernand Maurette, Asst. Director of the I. L. O. Page 26.

Scientific Management, Efficiency and Wages

In my opinion one of the fundamental causes of Indian labourer's inefficiency is one for which the labourer himself is not responsible. I mean the Indian employer and his lack of management. If the hours of labour are reduced to a reasonable level say 7 to 8 hours a day and the labourers are managed properly there is bound to be a good deal of increase in the Indian labourer's efficiency. There is a conspicuous absence of scientific management in India which could help to increase the efficiency of workers. Rationalisation of management means the application of the most up-to-date methods and technique and organisation with a view to minimise waste in effort and material. It is a very hopeful sign that some of the progressive employers have devoted their attention to this very important question. The following Bombay experiment may be studied with interest.[1]

In the weaving department of some Bombay mills the system of four looms per worker was introduced in 1928, and six looms per worker in 1933, the latter working only seven hours a day. In the spinning department the system of two sides per worker was introduced in 1928, and that of three sides per worker in 1933. In the latter case the sider worked only seven hours a day, and was also given additional facilities such as superior mixing, fine counts and more tarwallahs and doffers to help him. The effect of rationalisation upon the spinners is best indicated by comparing the number of persons required to mind 60,000 spindles before and after rationalisation, as prepared by the Bombay Labour Office.

[1] Industrial Labour in India. Geneva 1938, pages 175 to 176.

NUMBER OF OPERATIVES REQUIRED TO MIND 60,000 SPINDLES

Count	Before Rationalisation		After Rationalisation	
	Ordinary Draft	*High Draft*	*Ordinary Draft*	*High Draft*
20*s*.	1,314	834	514	469
30*s*.	875	741	467	416
40*s*.	927	744	406	312
80*s*.	917	682	302	225

A good deal of stress has been laid on the relation of efficiency and the hours of work in the previous section. If an employer could be convinced that by reducing the hours of work, there will be no decrease in the output, it may be easy to persuade him to reduce the hours of work. In this section we shall examine a more complicated conception, the relationship between efficiency and wages. It is said that the labourers are ill-paid because they are inefficient. On behalf of the labourers it is said that they are inefficient because they are ill-paid. In this connection Prof. Taussig observes that "the class of underfed labourers presents a distressing problem. They are ill-paid because they are inefficient, they are inefficient, for one reason, they are ill-paid. Yet they are easily demoralised, too often they remain still inefficient if better paid from charitable funds. Neither physically nor morally do they respond readily to possibilities of improvement. Often the adults are hopeless, children alone can be taken in hand with prospects of success."[1]

[1] Principles of Economics By F. W. Taussig, 3rd Edition, Vol., I. page 94.

It is usual to hear from the employers in this country that an increase in wages is likely to be spent on drinks than in increasing the welfare of the labourer. This is explained by the fact that the labourer has been so much brutalised by poverty that he has become almost incorrigible. This, I believe, is the case in India and the employers are quite justified in drawing their conclusions. But their duty is to read just the fundamentals so that more cheerful conclusions could be drawn. A good deal of improvement in Indian labour is bound to come if adequate attention is devoted to the upbringing of the children of labourers and more so the mothers of these children.

This should be our policy for the future. As regards the present, I believe that a good deal of increase in the efficiency of the Indian labourer can be achieved by increasing his wages.

It is a common observation that if a labourer is not well fed, he cannot work as well as a well fed labourer. The steam engine theory of labour also explains this. "It maintains or perhaps implies rather than maintains, that the vigour of a labourer is in proportion to what he consumes. The more is turned over to him, the stronger he will be and the more he will produce. Just as a power got from the steam engine depends on the fuel burned in the fire box."[1] The science of nutrition corroborates this truth. It has been estimated by Mr. Rowntree that in Yorkshire the earnings of one-sixths of the wage earning class fell short to secure the food, shelter and clothing needed for physical efficiency.

If this is the case in a rich country like the United Kingdom what must be the condition of the labourers in a country like India, the poverty of which is proverbial?

[1] Taussig Op.Cit., p. 92, Vol., I.

No reliable data is available in the country to show the earnings of all classes of labourers for the country as a whole. A good deal of information has been collected for the Bombay Presidency by the Labour Office, but this hardly meets our requirements when we are considering the problems of the country as a whole. As jute and cotton are the two main industries of the country we shall try to show the wages paid to the workers in these two industries.

Provincial factory administration reports show that the monthly earnings of cotton weavers and spinners in some provinces are as follows:—Central Provinces and Berar Rs. 30 and Rs. 15; Bengal Rs. 25 and Rs. 14; Punjab Rs. 28 and Rs. 20; and Madras Rs. 27 and Rs. 20. In the jute mill industry, single shift hessian weavers earn Rs. 31 per month and the average for both warp and weft spinners is Rs. 17-4-0 per month. The earnings of women workers in jute mills vary between Rs. 11 per month for most occupation and Rs. 15 per month for twisters.[1]

This clearly shows that the earnings in these two industries are hardly enough to make both ends meet especially when we take into account the large deduction that should be made for the payment of debts.

We have seen above that the Indian worker gets a very low wage and it is hard for him to make both ends meet. He has to stretch his resources, very vigorously, as he is heavily indebted, the burden of which crushes him in the end. The burden of this debt is aggravated by the excessive rates of interest which he has to pay. These vary from a minimum of 18% to a maximum of 150% per annum, and often above it. Almost all of this debt is unproductive.

[1] Times of India, Indian Year Book, Who's Who. Page 530, 1938.

It was observed in a previous section that Indian labourers are not pulled but pushed to the towns. One of the major forces which pushes him to the town is either the payment of his ancestral debt or the payment of his own debts which are generally due either to social expenditure or failure of crops.

These debts keep him under the thumb of the money-lender for the rest of his life and it is generally these debts he leaves for his heirs. In Bombay, for instance, the average expenditure on each worker's marriage is Rs. 214, in Hyderabad Rs. 250, in the Punjab where he has also to pay for the bride the expenditure is seldom less than Rs. 500. Similarly, heavy expenditure is incurred on births and deaths both of which are very frequent in this country.

The above two types of debts are in a way related to his industrial life. Quite a considerable amount of indebtedness is due to unemployment and sickness in the towns. His wages are so low that the worker has no power to save, even if he has the willingness to do so. Once he resorts to a money-lender, he never gets out of his clutches.

The problem of worker's indebtedness was very carefully examined by the Royal Commission on Labour in India and one of the very valuable recommendations of this Commission was that every obstacle should be placed in the way of getting easy loans. It is gratifying to note that adequate attention is being devoted to this problem. The C. P. Government in 1936 passed the Adjustment and Liquidation of Industrial Worker's Debt Act to liquidate the worker's debt. It is highly desirable that the example of the C. P. should be followed by other provinces without delay.

Connection Between Diet and Efficiency[1]

That there is an intimate connection between diet and efficiency has been realised only recently. The League of Nations in its detailed inquiries has discovered the physiological relation between diet and efficiency. It has been discovered that a number of diseases, whose causes were hitherto unknown or merely suspected, were due to dietic errors. "Rickets with its bony deformities, one of the scourges of western civilisation, and beriberi, a scourge of the rice-eating communities of the East, were shown to be dietic in origin and easily preventable."[2] The resistance to many of the serious infections of infancy and childhood, including tuberculosis, was found to be affected by diet. This partly gives the reason for the high infant mortality in the working class districts in this country.

The long list of charges which was formed against the Indian labourer in the beginning of this chapter and of which we were trying to find out the causes is now clear. He is following the natural course. He cannot work for long hours not due to any lack of character but because he is incapable of doing such work owing to physiological defects which are caused by the inadequacy both in quantity and quality of his diet. The following table proves the contention :

[1] This Section is mainly based on the Reports of the League of Nations on the Problems of Nutrition.

[2] Final Report of the Mixed Committee of the League of Nations on the Relation of Nutrition to Health, Agriculture and Economic Policy. Page 27.

[1] COMPARISON OF THE FOOD SUPPLY OF THE MADRAS PRESIDENCY (1933) WITH THAT OF JAPAN (1927) AND THAT OF THE UNITED KINGDOM (1934) (PER CAPITA)

	Japan (1927)	*United Kingdom (1934)*	*Madras Presidency (1933)*
Protein : Animal (grammes) ..	15.9	64	2.6
Vegetable (grammes) ..	72.6	41	40.0
Total protein (grammes) ..	88.6	87	42.6
Fat : Animal (grammes)	33.5	109	1.3
Vegetable (grammes) ..	14.2	15	36.5
Total fat (grammes) ..	47.7	124	37.8
Carbohydrates (grammes)	537.6	425	398.5
Calories	2,732	3,246	2,068

A further illustration is afforded by the effects of war-time food shortage on children. Their special food requirements for growth render children particularly sensitive to dietary deficiencies. Failure to achieve normal growth can easily be measured. This has been done for the school-children of Berlin. Those born and brought up during the war were definitely stunted. Thus, the children born in 1918 who entered school in 1925 were 2 to 2½ inches (6 to 6.5 cm.) smaller and 2 to 3 lb. (1 to 1½ kg.) lighter than those who entered school in 1933. The difference was even greater for children leaving school (aged 13-14); it was from 2½ to 3¼ inches (6 to 8 cm.) in height and from 8 to 12lb.

[1] Health Organisation, Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene. Geneva, May 1937. Page 7. Nurition By Dr. W. R. Aykroyd.

(4 to 5.5 kg.) in weight. In Leipzig, similarly the average height of boys increased by 3½ inches (7.5 cm.), that of girls by 4½ inches (10.5 cm.), from 1918 to 1933.

Additional evidence has been provided by recent experiments showing the rapid gain in stature and weight of children resulting from the addition to their usual diet, of a school meal, or even of a glass of milk daily. Thus, in a boy's home near London, a gain of 7lb. (more than 3 kg.) in weight and of 2.63 inches (6.7 cm.) in height in a year was recorded for boys who received half a litre (a pint) of milk daily in addition to the ordinary diet; others not receiving the additional milk gained only 3.89 lb. (1.7 kg.) and 1.84 inches (4.7 cm.) during the same period.

The milk, therefore, accounted for an extra gain of 43% in height and 81% in weight. Similarly, milk given twice daily in Paris to school children for six months resulted in a 40% extra gain of weight in boys and 65% in girls, as compared with children who had not received additional milk (1.67 kg. against 1.19 kg. in boys; 1.63 against 0.99 kg. in girls).[1]

Moreover, an examination of vital statistics in various countries shows large differences in mortality rates both as between different countries and between richer and poorer districts in the same country. Thus, the death rates in New Zealand and the Netherlands, for instance, are less than one-third of those prevailing in some countries of South America, Africa or Asia; and in some cities, as London, Berlin, and Paris, general mortality rates in poor districts are 50% higher than in the wealthier ones, while tuberculosis mortality is often four times as high in the former as in the latter, and the corresponding proportion of infantile mortality is as 2 to 1. Similarly, the corrected general mortality rate in

[1] Nutrition, Final Report of the Mixed Committee, pp. 28-29.

a depressed area such as Merthyr Tydfil (South Wales) exceeds that of a well-to-do district such as Epsom and Ewell by 166%.

There is no doubt that improvement in social conditions, and especially in the feeding of the population in these poorer countries, boroughs and districts, would bring about a considerable increase in health and save many lives.[1] The problem of diet has been criminally ignored in this country until very recently. If India wants to become a leading industrial country, it is absolutely essential that it should have an efficient and healthy working class. Whatever may be the other causes conducive to efficiency and health, the most important is a good balanced diet and no efforts should be spared in the country to provide every citizen with the food necessary for his health.

How to Increase the Efficiency and to Create a Stable Industrial Class

In the previous pages we have examined at some length the long list of charges that have been laid against the Indian labourer and have found that his inefficiency and bad habits are not so much due to his own character and are mostly the result of his environments. In order to make him a better labourer it is absolutely essential that his environments must be changed and also constant efforts should be made to change his outlook on life. At present life has no interest for him. He lives in filthy surroundings, works in an incongenial atmosphere for fairly long hours not for his own benefit but to pay his creditors. He does not work to live but lives to work. Under the circumstances we can hardly blame him for his present attitude towards life. If any efforts are to succeed to improve his lot, he must be imbued with a

[1] Nutrition, Final Report of the Mixed Committee, p. 30.

desire to live and enjoy life.

Discussing the causes of vigour in a nation's life, Marshall remarks: "Next come three closely allied conditions of vigour, namely, hopefulness, freedom and change. All history is full of records of inefficiency caused in varying degrees by slavery, serfdom and other forms of civil and political repression. Freedom and hope increase not only man's willingness but also his power to work. Physiologists tell us that a given exertion consumes less of the store of nervous energy if done under the stimulus of pleasure than of pain; and without hope there is no enterprise." This probably is one of the most important factors which has led to the tremendous development of the colonial world.

In India we find that a worker generally comes from a village to work only to earn some money to pay his debtors. It is quite clear that he has no interest in work and in his life in the town. He wants to get as much as he can in the shortest possible time and wants to run back to his village, which desire is stimulated by the bad housing, insanitary conditions and grossly adulterated food stuffs in the towns. As a result we find no stable industrial class in our country. As a matter of fact, with the exception of few towns there does not exist in India any permanent class of workers and the biggest problem of the Indian industries is the unstable working population. This is the root cause (to whatever effects it may be due to) of inefficiency in the workers, because they cannot put their hearts into their work which they regard as temporary calamity, and all efforts that are made for worker's welfare by the employers are wasted on this unstable population. The problem before the country is to produce a permanent class of workers. This could be achieved by two methods. Firstly, by improving the conditions of life in the towns and, by pulling the workers instead of pushing them, as is

the case at present. Secondly, the younger generation and the children of the workers must be carefully trained and from the very beginning they should be provided with an industrial bias, and a taste for town life. In the towns the industries should be confined to the suburbs and efforts should be made as far as possible to provide the village type of houses in the suburbs to the workers. Most important of all, they should be provided with all the amusements of village life and a special effort should be made to provide them with unadulterated food. Their children should be given free compulsory education and those who show some talents must be provided with technical education, by giving them scholarships and other such aids.

There are two very important factors which can create a better and more stable industrial class and these are, firstly, provision against unemployment, technically called unemployment insurance, and secondly, insurance for health. England was the first country to introduce a comprehensive scheme of unemployment assurance, but considering the present conditions of the country it is not a matter of practical politics in the immediate future to undertake such a scheme. But considering the tremendous number of unemployed medical graduates it should not be impossible to introduce a comprehensive health insurance scheme whereby a worker and his family could be guaranteed free medical attendance.

The State and the Worker

To improve the character and to increase the efficiency of a large class of workers is a long and expensive process and no ordinary employer has the means to make such a sacrifice, the results of which can be achieved only in the long run. Thus, there is a clear field for the state to operate.

It cannot be denied that through one motive or the

other the Government of India has been always taking some interest in the Indian worker. The first Factory Act was passed as long ago as 1882, and a consolidating Act has been passed in 1924 which provides for the reduction in the hours of work, and other conditions are imposed on the employers for the workers' benefit. A Royal Commission was appointed in 1928 to study the labour problems and issued a comprehensive report but most of its recommendations have not been carried out owing to lack of funds. Considering the tremendous importance of the labour problems it is essential that the state should not spare any efforts or funds to improve the lot of the working classes. The state should definitely undertake to provide free education and free health service.

If these are carried out, the expenditure incurred on them will more than repay its cost by increasing the industrial efficiency of the workers and by creating a healthy and stable class of industrial workers, who will add to the national dividend.

The employers can contribute a good deal to the efficiency of the workers by improving the organisation of the factories and managing them on scientific and rational lines. I personally believe that one of the main causes of the Indian labourer's inefficiency is the employers themselves. A large majority of employers are inefficient and consequently those who work under them are worse than their masters. According to Marshall, "he is the best businessman who contrives to pay highest wages,"[1] and only those employers can afford to pay the highest wages who have the ability to get the maximum out of the workers.

The Government have not devoted the attention and the funds for the welfare of the workers which the very important nature of the matter deserves. However,

[1] Marshall A., Principles of Economics, 8th Edition, p. 550.

it is not yet too late to begin. In addition to passing labour laws which are of restrictive nature the state should perform five other most important functions :

(1) To provide free compulsory education to all children and to provide technical education to those children who show some aptitude for it.

Dwelling on the relation between efficiency and education Prof. Taussig observes : "Mere ability to read and write opens at once a whole new world. He who possesses it can learn from the experience of all mankind and no longer from that of his parents and masters only. The extension of such a great movement as the system of interchangeable parts has depended largely on the spread of elementary education." "Though reading and writing do not make the ditch-digger stronger and geometry and literature do not add to the skill of the mechanic, all education makes for intelligence, discrimination, the utilisation of opportunities, the spread of improvements. It also makes for sobriety, honesty and steady endeavour."[1]

(2) To provide subsidy for health insurance.

(3) To provide a subsidy for the building of houses for the worker.[2]

(4) To restrict his borrowing powers and to reduce his existing debts.

(5) To guarantee him pure food.

If the state wholeheartedly devotes its attention to the labour problems and endeavours to carry out the suggestions which we have made above, it will considerably improve the efficiency of the workers. The efficient worker will contribute more to the national income than the amount spent on his welfare. This is the best investment which the state can make.

[1] Taussig, Op.Cit., pp. 99 to 100.

[2] The details of this scheme are discussed in my State Banks For India, Macmillan, 1939.

CHAPTER XII

ECONOMIC PLANNING

By P. C. JAIN, M. A., M.SC. (ECON.), LONDON
University of Allahabad

A planned economic system is one of the most popular creeds of modern times. This popularity apart from the purely economic advantages which planning offers is due, it appears to me, to two factors. In the first place, we have been greatly disappointed by the shortcomings of the existing system. The masses of mankind, as Sir Arthur Steel-Maitland[1] points out, will be ready to try a new system, proved or unproved, which holds out a hope of escape from the uncertainties and the hardships which they have been led to believe are inseparable from the old order. Their enthusiasm has been strengthened by the success, even though it is partial, of the Russian Five-Year Plans and the American Recovery Programme. Secondly, it is a widespread belief that our society has the potentiality of plenty for all, and, it is socially inexcusable that poverty and destitution should exist in such a world.[2] There is, therefore, a readiness to try any new system which promises such a result.

What is Planning?

Economic planning has been defined in two dozen different ways. We can only refer to some of the typical

[1] "The New America," 1934, p. 208. Also Pramathnath Banerji, "A study of Indian Economics," 1940 edition, p. 384.
[2] cf. Prof. Paul H. Douglas, "Controlling Depression," p. 280.

ones. Mrs. Barbara Wootton defines[1] economic planning as a system in which the market mechanism is deliberately manipulated with the object of producing a pattern other than that which would have resulted from its own spontaneous activity. Prof. Herman Levy[2] thinks that economic planning means securing a better balance between demand and supply by a conscious and thoughtful control either of production or of distribution or of both rather than leave this balance to be affected by 'automatically' working, invisible and uncontrollable forces. According to Dr. Hugh Dalton[3] economic planning, in its widest sense, is the deliberate direction, by persons in charge of large resources, of economic activity towards chosen ends. In a lighter vein, planning may be defined as the working of a number of organisations in conjunction with one another for some consciously accepted end.[4] The object of economic planning, according to some others, is the achievement and retention of a high standard of living for all the members of society. Still another definition asserts that planning in India should have for its object facilitating the greatest number of people to get the largest number of goods at the lowest price possible.[5] Economic planning may also be defined as the working of production and distribution on a preconceived pattern and the rehabilitation of the existing system to such a

[1] "Lament for Economics," 1938, pp. 213-14. Also see her book 'Plan or no Plan' for a more detailed discussion of the subject. These two books throw much scientific light on various other topics of Economics.

[2] The New Industrial System, 1936, p. 251.

[3] Practical Socialism for Britain, 1936, p. 243.

[4] Pamphlet No. 35 of the Political and Economic Planning Club, London, 1934.

[5] Planning and Industries Supplement to the 'Indian Finance,' March 1939, pp. 4-5 and 91.

plan, with a view to secure a better adjustment between demand and supply conditions.

All these definitions of planning, as is evident, lay varying emphasis on different aspects of planning; by their very nature they cannot be all comprehensive and complete. Economic planning of all types has three essential elements; the degree to which they may be present in a particular plan depends on the nature of the plan; it is perfectly possible to have a plan which consists of all the elements.

In the first place, economic planning involves preconceived, systematic, centralised effort to achieve predetermined ends. The individual parts of the social and economic system give up their independence in the common interest. The central authority determines the ends worthy of achievement and applies itself with this end in view to rehabilitate the existing structure and organisation of production and to tap resources which have so far been left untouched or under-developed. In the Indian economic system this last consideration involves encouraging such industries as the chemicals, machine and tools, automobiles, shipbuilding, aluminium and locomotives, for example. One method of securing this end, though there are others as well, is to lay down the level of production the system should achieve in a given period.[1]

Secondly, economic planning aims at producing commodities at the minimum costs per unit. It neces-

[1] cf. Sir M. Visvesvaraya, Planned Economy for India, 1937. The Russian five-year plan and subsequently the German five-year plan made use of this method. Sir M. Visvesvaraya has detailed out a scheme for India. His plan aims at doubling the national income and securing a five-fold increase in ten years in the net value of yearly production from Indian industries. His scheme of development also aims at reducing the number of people depending on agriculture by one-fifth during the same period.

sarily involves concentration of production in the optimum (most efficient) producing units. An effort is made to work the new industries at the optimum scale from the very beginning; the existing system of production is gradually pushed into the optimum scale. Furthermore, planning necessarily aims at a proper distribution of the income arising from this work. The interests of labour, consumers, and suppliers of raw material are safeguarded as much as the interest of the producers. Effort is made, in a comprehensive scheme of planning, to secure everybody an appropriate standard of living.

Finally, planning aims at securing a better adjustment between supply and demand than will obtain in an unplanned system. An effort is made, with varying degrees of success, to control over-production and shortage of supply both in the immediate future and in the long run. The intensity and amplitude of cyclical ups and downs in industry are reduced, though they cannot be entirely eliminated.

The Main Problem

It is now evident that unrestricted individual enterprise has not yielded benefits which some classical thinkers expected of it. The system has worked with jerks and has caused much discontent and injustice. This is due to the prevalence of imperfect competition[1] in the real world, while the classicals built their ideas on the assumption of perfect competition.[2] In the absence

[1] cf. Professor Chamberlain's "The Theory of Monopolistic Competition," 1936 and Mrs Joan Robinson, "The Economics of Imperfect Competition," 1933. Also consult N. Kaldar, Equilibrium of the Firm, Economic Journal, 44, 60, 1935.

[2] In modern literature perfect competition is supposed to prevail when (1) the number of buyers and sellers is so large that the doings of any one of them does not have an appreciable effect on the total market situation; (2) buyers are indifferent between

of centralised planning our productive system is open to grave defects.

In the first place, it has not always been possible to concentrate production in plants with lowest average costs per unit. This has naturally caused economic waste. High costs plants manage to survive because consumers demand is irrational. The consumers are often ignorant of alternative sources of supply. They sometimes have sentimental attachment to a particular brand, let us say, of cigarettes and are prepared to pay one pice more per packet rather than smoke another equally good make. Furthermore, habits after a time become permanent and even if there be a desire to change, it is not always possible to do so. Some consumers have a wrong perspective; they believe that an article with a higher price is necessarily of a better quality. This unsettles the working of the law of demand. In some respects, fashion goods, for example, consumers tastes are fickle. A manufacturer of ladies' hats successfully plays upon this susceptibility, and unnecessarily multiplies designs involving small scale production. The result of all this is that with recession in demand the high-cost producer, whose goods will sell even at a higher price, finds it possible to exist.

Centralised planning helps to reduce costs in three ways. There is a standardisation of consumers' goods. A sufficient variety is allowed for the exercise of consumers' choice, but it is not possible for any individual producer to multiply brands; the central organisation takes care of that. This enables large scale production, thus reducing costs. It is evident that it is not in the power of any single producer to impose such a standardi-

different sellers. So that market prices are beyond the control of any single producer. Imperfection of competiton arises from the absence of either one or both of these conditions.

sation; only a central organisation can do it. Secondly, centralised planning also prevents the wastes of retail distribution[1]. It is calculated that in U. S. A. about 38 per cent of the cost of the goods and in England over £ 760 millions of consumers' money every year is spent on retail and wholesale distribution. This is a tremendous waste. In India no reliable figures are available but the waste is substantial and effort should be made to reduce such costs. Economic planning, it is my belief, would do it. Finally, it is of the highest importance that research should be undertaken in every industry. A large section of the Indian industry has culpably neglected this urgent problem. Economic planning gives due importance to research in industry. Research reduces costs, it helps to economise the national resources, and it diminishes human suffering.

Secondly, in the absence of centralised planning there is invariably always over-production. Not all the producers are well informed about market demand; even if they are careful, reliable data is not always available. There are inevitable technical difficulties in the way of interpreting market trends. There is necessarily a time-lag between the study of market conditions and the supply of goods to satisfy them. Tastes might change in the meanwhile and render the supply useless. Added to all this is the fact that each producer, in his ignorance, tries to satisfy as large a proportion of the market demand as he can. The result is over-production. Even if the danger of over-production is pointed out to individual producers, they are not always mindful of it. The Indian Cement Industry has long been threatened

[1] cf. Henry Smith, Retail Distribution, 1937; "Britain without Capitalists", published by Lawrence and Wishart, London, chapter 3rd. on distribution; Britain in Depression, edited by Prof. J. H. Jones and others, chapter XX.

with such overproduction; our sugar industry has already passed through that stage; the jute producers, in spite of best efforts to the contrary, have failed to regulate the amount of supplies.

We have plenty with poverty. It was a sad commentary on our system when wheat was burnt or thrown into the sea in the U.S.A., while millions of human beings actually starved in other countries. There is an ignominious maldistribution of wealth in this world. In our own country we have extremes of wealth and poverty. This becomes still more intolerable when a change in our economic organisation promises redress.

Centralised planning will remove these defects in two ways. In the first place, for the planning authority it will be possibe to correlate market demand[1] with available raw materials and power resources. It will also be possible, to some extent, to control the market demand itself. The object is to secure production at lowest average cost. Each producer will only be allowed to supply his share of the market demand. It might not be possible to secure a perfect adjustment between supply and demand, but a closer approximation to it will surely be available. Secondly, though the guiding principle will be equation of marginal cost with marginal revenue, welfare considerations will not be neglected. Central planning appreciates the fact that human beings in themselves are national assets. In a perfect system, which might, however, not be easily available in the real world, everyone will get the work which he can best perform. In the long run there

[1] It is possible to have planning in a society in which there are no markets. In that case the planning authority will have to rely on its own estimates of the national demand and an effort will be made to approximate the productive system to this estimate.

shall be no unemployment—educated or illiterate. No one will starve.

Finally, in the absence of centralised planning there is often a waste of economic resources. Three kinds of waste is experienced in an unplanned economic system. The individual producer is concerned with his profits, he does not care whether his action leads to a wasteful use of national resources. A good example is provided by the reckless use of British coal in the past; it is only now that the English people have become alive to the danger. There is another type of waste when resources are left untapped because information about their existence is not available, unjustifiable foreign competition makes their exploitation impossible, capital and skilled labour are not available because nobody planned for their future supply. Capital and skilled labour cannot grow overnight, in order to get a supply in the future effort has to be made much in advance. India is a classical home of this second type of waste. It has been realised only recently that we can usefully develop our chemical, machine and tool, locomotive and automobile industries, among others. Finally, under the existing system the health, happiness, and welfare of the manual workers have been grossly neglected. The existing social insurance and welfare schemes are completely inadequate; social services are only encumbrances to the employers; the workers find themselves neglected. Economic planning is capable of eliminating all these three varieties of waste.

Some Essential Points

It is a practice with some people to use economic planning, socialism, and bolshevism either as synonyms or as inevitably mixed up with each other. This attitude is wrong. We can have planning under every

system of political organisation.[1] As a matter of fact there is never a choice between planning and no planning; all we can do is to select any one particular plan in preference to others, because every economic system no matter how defective involves some planning.[2] Experiments in economic planning have in recent years been made in U.S.A., Great Britain, Italy, Germany, Russia, and Sweden. These three sets of countries owe allegiance to different political philosophy; all of them have undertaken planning in the past few years; the only difference is that the plans differ in their details and in their thoroughness. But all of them involve some sort of preconceived centralised effort which is the chief feature underlying any deliberate economic planning. It may here be mentioned that planning in the past has mostly been national in character but in recent years there has been a desire to make its scope international,[3] though one cannot be very optimistic in this matter. H. G. Wells wants an international twenty-year plan and Dr. Lorwin, at Amsterdam, in 1931, was content to ask for a world five-year plan covering all the economic and non-economic fields of activity.[4]

There is no one set plan to which all the countries must necessarily conform.[5] Every country, so also

[1] cf. Dr. Huge Dalton, op.cit., pp. 246-47. He says, 'Planning is not the same thing as socialism. Socialism is primarily a question of ownership, planning a question of control or direction.' Also see, in this connection, Collectivist Economic Planning, edited by Prof. F. A. von Hayek, 1935, p. 15.

[2] cf. Prof. Lionel Robbins, Economic Planning and International Order, 1937, page 4.

[3] Prof. Robbins, op.cit.

[4] For details consult F. E. Lowley's 'The Growth of Collective Economy', 1938, Vol. II, p. 403 and the references given there.

[5] cf. K. N. Sen, Economic Reconstruction of India, 1939, p. 34. Also W. R. Maclaurin, Economic Planning in Australia,

India, has to take full account of the prevailing conditions in drawing up a scheme of planning. It will be definitely harmful to India if we blindly copy the Russian or any other scheme of planning. We have to evolve our own system.

Partial planning is worse than useless. Planning to be successful must be thorough and all-pervading.[1] The great danger in a partial plan is twofold. We might become self satisfied with our superficial efforts and this may mask from us the real intensity of the problem; the whole economic system is intimately inter-related and interference in one field might create fresh difficulties elsewhere, thus causing injustice and confusion. It might not always be possible to have a full-fledged scheme of planning from the very start but any control, of whatsoever degree, should be applied uniformly on all the fronts. It is only then that planning can be expected to show good results.

Economic planning may not be inconsistent with private property and inequality of income. Human beings have differences of quality and contribution, not altogether as a result of existing social institutions, and different payments may be called for. There will, however, be equality of opportunity and extremes of wealth and poverty will not exist in a planned system.

There are some essential prerequisites of success. In the first place, if planning is to be successful,

1937, p. 284, where we are told: 'Australian experience does not lead to the conclusion that there is any one universal technique that can be applied to facilitate recovery. Rather it emphasises the fact that for each country a formula must be evolved to suit the particular conditions there.'

[1] cf. Werner Sombard, Die Zukunft des Kapitalismus, p. 20 and Prof. Emil Lederer, Planwirtschaft.

we should have a thorough statistical knowledge[1] about the available raw materials, power resources, and market demand. In India our knowledge about the existing mineral and power resources of the country is very fragmentary. A thorough survey is still to be made.[2] The Bowley Robertson Committee (1935) recommended a census of production. This along with a study of the existing market demand is of fundamental importance if planning is to be successful. Moreover, planning implies a certain standardisation of wants which is the very keystone of mass production and planning possibilities.[3] This can only be done if detailed information about the market demand is available. In the absence of this information the planning authority finds itself at a loss to lay down any sensible policy. Secondly, this statistical information should be properly interpreted and well-defined ends and objectives should be laid down. Nothing is more fatal to centralised planning than vague generalisations without any definite ends capable of achievement. Finally, it is very essential that those entrusted with the carrying out of the plan, and those whose interests are vitally affected by it, should be convinced of its utility. In U.S.A. President Roosevelt's efforts at central planning were severely handicapped because the businessmen refused to support it. There should at least be some method of enforcing the plan if the persons concerned will not give it a wholehearted support.

Criticisms against Central Planning

Economic planning has been subjected to many

[1] cf. P. N. Bannerji, op.cit., p. 381; also K. N. Sen, op.cit., Chapter VI.

[2] See Chapter 2nd.

[3] cf. Prof. Herman Levy, op.cit., pp. 257-59.

criticisms. Many eminent authorities maintain[1] that in a system of planning, in which free markets have been dispensed with, the producing authority has no test to guide his activities. The point is simple. We are told that in a competitive system with free markets there prevails a market price for every commodity and service, determined by the interaction of demand and supply. Each producer tries to adjust his costs of production to this price. This, therefore, is the test which guides him in deciding the quantity of a particular commodity he should produce for the market. When all the producers do this the national resources are distributed in the best possible way with relation to the prevailing market demand. In the absence of free markets the cost price test is not available to us, hence some commodities are liable to be produced too much and others too little. This naturally causes a waste of economic resources. The mistake of this criticism is that it implicitly assumes that a free market mechanism is an absolute ideal; in other words it forgets that a competitive system with uncontrolled markets in its actual working is also very defective. Therefore, we should compare the system under economic planning, not with an imaginary ideal, but with a system which actually prevails in the absence of planning; and, if we do so, we cannot categorically declare that a planned system is even worse than the defective working of a competitive system.

As to the test which should guide the decision of

[1] See Collectivist Economic Planning, edited by Prof. von Hayek; 'Socialism' by Prof. von Mises; Economic Planning in Soviet Russia by Boris Brutzkus (1935).

Prof. Brutzkus writes, 'At any rate under a planned economy with shattered markets it is impossible to make a proper choice between factories which it pays to use and factories which it does not pay to use.' (p. 229).

the planning authority, it is true that the criterion of costs and prices will not be available to him. Two alternative tests, however, are possible. One is to calculate the absolute requirements of the population at a given level of efficiency and to produce goods in the proportion that such a standard of living indicates. It is admitted that a study of such requirements can at best be incomplete but even rough estimates will suffice, at least in the beginning. Moreover, there is undoubtedly an element of arbitrariness in such a calculation, but there is nothing to prove that this arbitrariness will make us less happy or less prosperous because even in an unplanned system the decisions of the producer and shopkeepers also are arbitrary to some extent. Secondly, a thorough survey should be made of the available national resources: this will indicate the ultimate production of which the system is capable. A combination of these two tests will give us a working formula. If our resources in a particular direction exceed our requirements, we will transfer the surplus to alternative uses; if our requirements are greater than our resources, even after all the adjustments have been made, we will have to pull down our standard of living to that extent. The distribution of individual shares out of the National Dividend will also be done on the basis of the predetermined standard of living mentioned above. The work, though difficult, is perfectly possible, and the new system is bound to be more equitable than the present one because under it effort will be made to give each man enough for his needs.

The second, and in our judgment a perfectly valid, criticism against full-fledged centralised planning is that under this system the industrialists have no inducement to put in their best efforts. The profit motive acts as a driving force in case of individual enterprise. An individual producer puts in his best

efforts because to neglect his work touches his pocket. This motive keeps the producer active and sincere. The profit motive ceases to operate under centralised economic planning because welfare considerations become more important and remuneration cannot be proportional to productive effort. Hence, it is necessary to replace this profit motive by some other equally powerful alternative, if slackness and sabotage have to be prevented. One or more of the following three forces replace profit motive under centralised planning: devotion to duty, fear of violence, attachment to an ideology where economic planning and political ideologies are mixed up. It is excellent if a devotion to duty can be encouraged in the workers, but it is not always easy to achieve, and sometimes even temporary realisation of it becomes difficult. The third—attachment to an ideology—may be voluntary and more durable, but there is the great danger that under it economic principles may be altered out of shape by political interference. The worst of these alternatives is the fear of violence. It is never permanent. It has been our experience that fear and consequent anxiety sap the best qualities in the workers; in the absence of security the workers can never put in their best. Fear above all is completely demoralising. The fact has to be faced that in this imperfect world of ours no suitable substitute for the profit motive is available under centralised planning.

Finally, it is essential for the success of planning that we have, firstly, a perfect timing between the supply and demand of different departments, secondly, that over-centralisation is prevented. It is unluckily to be admitted that in operation both these are difficult to achieve. A moment's thought will reveal to us the possibility of chaos if a certain department is slack and the whole scheme is temporarily clogged because of it.

Delay and shortage are both highly detrimental. In case of over-centralisation the subordinate departments lose their vigour and initiative, and are liable to become inefficient. To achieve success and to steer clear of these two dangers is a difficult, if not an impossible, task.

INDEX